LOS ANGELES DEPARTMENT OF CITY PLANNING
221 North Figueroa St., Suite 1350
Los Angeles, CA 90012

NOTICE OF COMPLETION AND AVAILABILITY
OF DRAFT ENVIRONMENTAL IMPACT REPORT

July 1, 2021

ENVIRONMENTAL CASE NO.:	ENV-2018-7182-EIR
STATE CLEARINGHOUSE NO.:	2019060015
PROJECT NAME:	Senior Residential Community at The Bellwood
PROJECT APPLICANT:	SBLP Century City, LLC
PROJECT ADDRESS:	10328–10384 and 10341–10381 Bellwood Avenue, Los Angeles, CA 90064
COMMUNITY PLAN AREA:	West Los Angeles
COUNCIL DISTRICT:	5—Koretz
PUBLIC COMMENT PERIOD:	**July 1, 2021, to August 16, 2021**

In accordance with the California Environmental Quality Act (CEQA), the City of Los Angeles (City), as Lead Agency, has prepared a Draft Environmental Impact Report (DEIR) for the proposed Senior Residential Community at The Bellwood Project (Project). This notice provides the public, nearby residents and property owners, responsible agencies, and other interested parties with a summary of the Project, conclusions of the DEIR, information regarding the availability of the DEIR for public review, and the timeframe for submitting comments on the DEIR. Comments must be submitted in writing according to the directions below.

PROJECT DESCRIPTION:
The Project proposes the development of a new eldercare facility for persons 62 years of age and older on a 2.22-acre (96,792 square feet) site located at 10328-10384 and 10341-10381 Bellwood Avenue (Project Site) in the West Los Angeles Community Plan area of the City of Los Angeles (City). The Project Site includes parcels located generally north/west and east/south of Bellwood Avenue as well as the portion of Bellwood Avenue that bisects the Project Site. The Project would include 192 senior housing residential units, comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms; 50,463 square feet of indoor common areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area; and 14,630 square feet of outdoor common areas, including several courtyards and terraces that would be distributed throughout the Project Site. The proposed uses would be located within a single building ranging in height from 38 feet to 70 feet, or three to six stories. A total of up to 140 vehicle parking spaces would be provided within two subterranean levels beneath the proposed building. Three existing multi-family residential developments with a total of 43,939 square feet, including 112 residential units, would be removed to accommodate the Project. Additionally, as part of the Project, the portion of Bellwood Avenue that bisects the Project Site would be vacated and realigned, with through access maintained from both sides of Bellwood Avenue. The Project would comprise 241,754 square feet of floor area with a floor area ratio (FAR) of up to approximately 2.77:1 to 3.2:1; and would require the export of approximately 74,800 cubic yards of soil.

ANTICIPATED SIGNIFICANT ENVIRONMENTAL EFFECTS:
Based on the analysis included in the DEIR, the Project would result in Project-level significant and unavoidable on-site construction noise impacts and on- and off-site construction vibration impacts with respect to human annoyance. The Project would also result in cumulative on- and off-site construction noise impacts, as well as

cumulative off-site construction vibration impacts related to human annoyance. All other potential impacts would be less than significant or mitigated to less-than-significant levels.

FILE REVIEW AND COMMENTS:

Coronavirus (COVID-19) Update

The Department of City Planning recognizes the unprecedented nature of COVID-19, and having been identified as an essential City service, continues to work and respond to all inquiries pertaining to our ongoing efforts to process entitlement applications and study updates to our community plans and citywide policies. As a result of the Mayor's Safer at Home Order issued March 19, 2020, some of the previous means to access materials at libraries are no longer available to all residents or interested parties. To that end, the Department of City Planning will ensure that interested parties seeking information about the Project will have access.

The DEIR is available online at the Department of City Planning's website at https://planning.lacity.org/development-services/eir. The DEIR can be purchased on CD-ROM for $5.00 per copy by contacting the planning staff listed below.

If you are unable to access digital copies of the DEIR, the Department will attempt to make reasonable arrangements to mail and supply the materials. In addition, physical copies of the DEIR and case file can still be viewed at City offices. The Department has implemented additional measures to ensure the safety of the public viewing physical case files, necessitating appointments.

The DEIR and the documents referenced in the DEIR are available for public review, **by appointment only**, at City Planning offices located at 221 N Figueroa Street, Suite 1350, Los Angeles, CA 90012. Please contact the Staff Planner listed below to schedule an appointment.

If you wish to submit comments following review of the DEIR, please reference the Environmental Case No. above, and submit them in writing by **no later than 4:00 P.M. August 16, 2021.**

If you are unable to access project materials, or wish to schedule an appointment, please contact the project planner for the project, Paul Caporaso at (213) 847-3629 or paul.caporaso@lacity.org.

Please direct your comments to:

Mail:	Paul Caporaso City of Los Angeles, Department of City Planning 221 N. Figueroa Street, Suite 1350 Los Angeles, CA 90012
E-mail:	paul.caporaso@lacity.org **Case Number:** Case Number: ENV-2018-7182-EIR

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LOS ANGELES
DEPARTMENT OF CITY
PLANNING
221 North Figueroa St., Suite 1350
Los Angeles, CA 90012

DRAFT
ENVIRONMENTAL IMPACT REPORT

Senior Residential Community at The Bellwood

Case Number: ENV-2018-7182-EIR
State Clearinghouse No. 2019060015

Project Location: 10328–10384 and 10341–10381 Bellwood Avenue, Los Angeles, CA 90064

Community Plan Area: West Los Angeles

Council District: 5—Koretz

Project Description: The Project proposes the development of a new eldercare facility for persons 62 years of age and older on a 2.22-acre (96,792 square feet) site located at 10328-10384 and 10341-10381 Bellwood Avenue (Project Site) in the West Los Angeles Community Plan area of the City of Los Angeles (City). The Project Site includes parcels located generally north/west and east/south of Bellwood Avenue as well as the portion of Bellwood Avenue that bisects the Project Site. The Project would include 192 senior housing residential units, comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms; 50,463 square feet of indoor common areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area; and 14,630 square feet of outdoor common areas, including several courtyards and terraces that would be distributed throughout the Project Site. The proposed uses would be located within a single building ranging in height from 38 feet to 70 feet, or three to six stories. A total of up to 140 vehicle parking spaces would be provided within two subterranean levels beneath the proposed building. Three existing multi-family residential developments with a total of 43,939 square feet, including 112 residential units, would be removed to accommodate the Project. Additionally, as part of the Project, the portion of Bellwood Avenue that bisects the Project Site would be vacated and realigned, with through access maintained from both sides of Bellwood Avenue. The Project would comprise 241,754 square feet of floor area with a floor area ratio (FAR) of up to approximately 2.77:1 to 3.2:1; and would require the export of approximately 74,800 cubic yards of soil.

PREPARED FOR:
The City of Los Angeles
Department of City Planning

PREPARED BY:
Eyestone Environmental, LLC

APPLICANT:
SBLP Century City, LLC

July 2021

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II. Project Description

II. Project Description

1. Introduction

The Senior Residential Community at The Bellwood (Project) would involve the development of a new eldercare facility for persons 62 years of age and older on a 2.22-acre (96,792 square feet) site[1]. The Project would include up to 192 senior housing residential units, comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms; approximately 50,463 square feet of indoor common areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area; and approximately 14,630 square feet of outdoor common areas, including several courtyards and terraces. The proposed uses would be located within a single building ranging in height from up to 38 feet to 70 feet, or three to six stories. A total of up to 140 vehicle parking spaces would be provided within two subterranean levels beneath the proposed building. Three existing multi-family residential developments with a total of 43,939 square feet, including 112 residential units, would be removed to accommodate the Project. Additionally, the Project includes the vacation of a portion of Bellwood Avenue that currently bisects the Project Site and its realignment as a private street.[2] The Project would comprise 241,754 square feet of floor area with a floor area ratio (FAR) of up to approximately 2.77:1 to 3.2:1.[3]

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[1] *The lot area following the proposed merger and subdivision, including the vacated and realigned portion of Bellwood Avenue and excluding an anticipated 5-foot right-of-way dedication on a portion of Bellwood Avenue, would be 93,422 square feet or 2.14 acres. The total lot area may vary depending on the ultimate configuration and designation of the realigned portion of Bellwood Avenue.*

[2] *The portion of Bellwood Avenue that bisects the Project Site is proposed to be vacated as a public street and merged with the Project Site parcels. The segment of Bellwood Avenue through the Project Site would be realigned along the northern part of the Project Site, closer to Olympic Boulevard, and through public access would be maintained. While the realigned portion of Bellwood Avenue through the Project Site is currently proposed to become a private street; it could alternatively be dedicated to the City as a public street.*

[3] *Based on buildable area (as defined in Los Angeles Municipal Code Section 12.03) of approximately 87,421 square feet. FAR is a calculation of the ratio of building square footage to buildable lot area. As the final buildable lot area may vary based on the ultimate configuration and designation of the realigned portion of Bellwood Avenue, the FAR may range from approximately 2.77:1 to 3.2:1; however, the square footage of the building would not change.*

2. Environmental Setting

a. Project Location

The Project Site is located at 10328–10384 and 10341–10381 Bellwood Avenue (Project Site) within the West Los Angeles Community Plan area of the City of Los Angeles (City). The Project Site is located approximately 5.5 miles east of the Pacific Ocean and 8.2 miles west of Downtown Los Angeles. As shown in Figure II-1 on page II-3, the Project Site is irregularly shaped and is bisected by Bellwood Avenue. Bellwood Avenue is a U-shaped street that connects to Olympic Boulevard at each end. The Project Site includes parcels located generally north/west and east/south of Bellwood Avenue as well as the portion of Bellwood Avenue that bisects the Project Site. The portion of the Project Site located generally north/west of Bellwood Avenue is bounded by the Century Park hotel to the north, Bellwood Avenue and multi-family residential uses to the east and south, and a small commercial shopping center to the west that includes a cleaners and a smog check station. The portion of the Project Site located east and south of Bellwood Avenue is generally bounded by a Courtyard by Marriott hotel and Bellwood Avenue to the north, single-family residential uses to the east and south, and a beauty salon to the west. Along the southern and eastern boundaries of the Project Site there is a grade difference ranging between approximately 14 feet to 42 feet, such that the Project Site is situated below most of the adjacent single-family residential uses. This sloping topography continues across the Project Site and its surroundings towards Olympic Boulevard.

b. Surrounding Land Uses

As previously described, the Project Site includes parcels located generally north/west and east/south of Bellwood Avenue. As stated above, the portion of the Project Site located generally north/west of Bellwood Avenue is bounded by the Century Park hotel (approximately four stories and 58 feet in height) to the north, Bellwood Avenue and multi-family residential uses to the east and south, and a small commercial shopping center to the west that includes a cleaners and a smog check station. The portion of the Project Site located east and south of Bellwood Avenue is generally bounded by a Courtyard by Marriott hotel (approximately four stories and 54 feet in height) and Bellwood Avenue to the north, single-family residential uses to the east and south, and a beauty salon to the west. Beyond the immediate surroundings of the Project Site are additional commercial and office uses along Olympic Boulevard, including a Ralph's grocery store located to the north and a Goodwill Donation Center to the west. Single- and multi-family residential uses continue east and south of the Project Site. The Project Site is also located approximately 0.9 mile west of the Fox Studios Lot and 0.5 mile south of the Century City commercial district.

Figure II-1
Project Location Map

Source: Google Maps, 2018.

3. Existing Conditions

As shown in Figure II-2 on page II-5, the Project Site is currently developed with several multi-family residential buildings and associated structures and parking, and includes the portion of Bellwood Avenue that bisects the Project Site. Specifically, the Project Site encompasses three multi-family residential developments totaling 43,939 square feet, including 112 units comprised of 95 studio units, 15 one-bedroom units, and two two-bedroom units. These three multi-family residential developments include a two-story, 13-unit building located at 10341–10381 Bellwood Avenue; seven, two-story buildings with a total of 82 units located at 10328–10366 Bellwood Avenue; and six, one-story bungalow court buildings located at 10368–10384 Bellwood Avenue with a total of 17 units.

The existing buildings were constructed between approximately 1940 to 1951. The existing units are generally approximately 275 square feet to 375 square feet in size. Access to each of the multi-family residential developments is currently available via several driveways along Bellwood Avenue. Existing landscaping within the Project Site includes 96 ornamental trees and shrubs, including eight street trees located within the portion of Bellwood Avenue proposed to be vacated and realigned, as well as ornamental trees with trunks on or partially on adjacent properties but with roots and canopies on the Project Site.

The Project Site is located within the West Los Angeles Community Plan area. The Project Site, which is comprised of 13 lots (including nine contiguous lots along the southerly side of Bellwood Avenue and four contiguous lots along the northerly side), has a Neighborhood Commercial General Plan land use designation and is zoned R3-1-O (Multiple Residential, Height District 1, Oil Drilling)[4] and C2-1VL-O (Commercial, Height District 1VL, Oil Drilling).[5] The R3 designation permits a wide variety of residential uses, including group dwellings, multiple dwellings, apartment houses, boarding houses, rooming houses, accessory uses and home occupations, senior independent housing, and assisted living care housing. The C2 designation permits a wide variety of uses, including, but not limited to, eldercare facilities, multiple dwellings, various retail and restaurant spaces, auditoriums, automotive fueling and service stations, churches, drive-in businesses, hospitals, sanitariums, clinics, and schools. Height District 1 within the R3 Zone limits the height to 45 feet and the FAR to 3:1. Height District 1VL within the C2 Zone limits the height to 45 feet and three stories (except that there is no restriction on the number of stories for buildings used entirely for residential purposes) and the FAR to 1.5:1. The "O" designation indicates the Project Site is located within an Oil Drilling District where the drilling of oil wells or the production from the wells of oil, gases, or other hydrocarbon substances is permitted. The

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[4] *The R3 zoning applies to Lots 29-35 of Block 13 of Tract 7260.*

[5] *The C2 zoning applies to Lots 36-37 of Block 13 of Tract 7260 and Lots 10-13 of Block 14 of Tract 7260.*

Figure II-2
Aerial Photograph of the Project Vicinity

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

Project Site is also located within the West Los Angeles Transportation Improvement and Mitigation Specific Plan Area.

Primary regional access is provided by Santa Monica Boulevard (California State Route 2), the Santa Monica Freeway (I-10), and the San Diego Freeway (I-405), which are all accessible within 2 miles of the Project Site. Major arterials providing regional access to the Project Site include Olympic Boulevard, Beverly Glen Boulevard, and Pico Boulevard. Public transit service in the vicinity of the Project Site is currently provided by Metro, Culver City Bus, Santa Monica Big Blue Bus, Antelope Valley Transit Authority, Santa Clarita Transit, and LADOT Commuter Express. Bus stops that serve the Project Site (within a 0.25-mile walking distance) are currently provided along Olympic Boulevard at Beverly Glen Boulevard, Kerwood Avenue, and Century Park West and include Culver City Bus Route 3 and Santa Monica Big Blue Bus Route 5. In addition, the second section of Metro's Purple Line Extension Transit Project is currently under construction in the vicinity of the Project Site and is scheduled for completion in 2025.[6] The second section of Metro's Purple Line Extension would include a subway station at Constellation Boulevard and Avenue of the Stars, approximately 0.5 mile northeast of the Project Site.

4. Project Objectives

Section 15124(b) of the California Environmental Quality Act (CEQA) Guidelines states that the project description shall contain "a statement of the objectives sought by the proposed project." Section 15124(b) of the CEQA Guidelines further states that "the statement of objectives should include the underlying purpose of the project." The underlying purpose of the Project is to provide a senior residential housing community that meets the needs of an increasingly aging population in the City by providing variety in housing together with integrated services. The Project's basic and fundamental objectives are provided below.

- Promote adequate housing that is accessible to senior citizens by providing a new senior-only housing residential community that meets the daily living needs of the City's aging adult population, including recreational and social needs on-site, advancing the West Los Angeles Community Plan Objective 1-4 and supporting General Plan (Housing Element) Objective 1.1 to provide housing to meet current and projected needs.

- Develop senior-independent units, assisted living guest rooms, and memory care guest rooms to help meet the specific housing needs of the City's aging population, consistent with General Plan (Housing Element) Objective 1.1, and Policy 1.1.3, and West Los Angeles Community Plan Objective 1-1 to construct a range of

[6] *Metro, www.metro.net/projects/westside/, accessed September 8, 2020.*

different housing types that address the diverse needs of the City's existing residents and projected population.

- Locate senior citizen housing within reasonable walking distance of health and community facilities, services and public transportation by integrating supporting services with the senior housing units in one building, supporting the West Los Angeles Community Plan Policy 1-2.2.

- Provide a range of on-site recreational, health, wellness and dining activities and services to support the daily needs of seniors and promote safety and health consistent with General Plan (Housing Element) Objective 2.1.

- Unify the Project Site to maximize efficient use of the site and associated parcels, and respond to the character of surrounding land uses, while maintaining adequate public circulation.

5. Description of Project

a. Project Overview

The Project proposes the development of an eldercare facility consisting of up to 192 senior housing residential units comprised of 71 senior-independent dwelling units,[7] 75 assisted living guest rooms, and 46 memory care guest rooms; 50,463 square feet of indoor common areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area; and 14,630 square feet of outdoor common areas, including several courtyards and terraces that would be distributed throughout the Project Site. The proposed uses would be located within a single building ranging in height from up to 38 feet to 70 feet, or three to six stories. A total of up to 140 vehicle parking spaces would be provided within two subterranean levels beneath the proposed building. Three existing multi-family residential developments with a total of 43,939 square feet, including 112 residential units, would be removed to accommodate the Project. Additionally, as part of the Project, the portion of Bellwood Avenue that bisects the Project Site would be vacated and realigned, with

[7] *Senior-independent units are residential units for persons 62 years of age and older, and they are classified as dwelling units, which include a kitchen. Assisted living is licensed by the state for the provision of assistance to people 62 years of age or older who require assistance with two or more non-medical activities of daily living. The City allows assisted living units to be either dwelling units or guest rooms (i.e., units without a kitchen). The Project's proposed assisted living units would be guest rooms. In order to allow Project residents to age in place and avoid the need to relocate to an assisted living guest room if additional care is needed, the 71 senior independent living units would also meet the regulatory requirements for assisted living units; however, these units would remain dwelling units and would not be converted to guest rooms. The Project's memory care guest rooms would also be licensed by the state, to provide 24-hour care for people suffering from Alzheimer's disease or other conditions resulting in dementia.*

through access maintained from both sides of Bellwood Avenue. The Project would comprise 241,754 square feet of floor area with a floor area ratio (FAR) of up to approximately 2.77:1 to 3.2:1. A Conceptual Site Plan and Conceptual Floor Plans are provided in Figure II-3 through Figure II-11 on pages II-9 through II-17.

The Project would provide care, services and assistance for the daily living needs of its residents. Assistance and activities provided on-site would include laundry, housekeeping, exercise and fitness classes, art and recreational classes, social events, and service of three meals per day in common dining rooms. Caregivers and staff will be trained in senior care and emergency response, and nurses would also be located onsite. A shuttle service would be provided for local trips to shopping and services.

b. Layout, Design and Architecture

As shown in the Conceptual Site Plan provided in Figure II-3 on page II-9, the proposed building would be constructed around a central courtyard that would be open to the sky. The assisted living guest rooms and memory care units would be generally concentrated within the eastern portion of the building, east of the courtyard; and the independent living units would be generally concentrated within the western portion of the building, to the west of the courtyard. The assisted living guest rooms would be located on the second through sixth floors generally within the central and east portions of the building, and the independent living dwelling units would be located on the first through sixth floors generally within the west and central portions of the building. The memory care guest rooms would be located on the first and second floors within the eastern portion of the building and would be separated from the independent living and assisted living components. As summarized in Table II-1 on page II-18, the proposed 71 dwelling units dedicated to independent living would consist of 43 one- and 28 two-bedroom units. Each of the independent living units would include a private outdoor terrace, a full kitchen, and an in-unit washer/dryer. The proposed 75 guest rooms dedicated to assisted living would consist of 51 one-bedroom and 24 two-bedroom units. Each of the assisted living guest rooms would include a sitting or living room area and a built-in cabinet with sink. The 46 memory care guest rooms would be studio units. Each of the memory care guest rooms would include private bedrooms with a private bathroom and a built-in cabinet with sink and under counter refrigerator. Some guest rooms may include a small seating area.

As shown in Figure II-6 on page II-12, the ground floor level (first floor) of the proposed building would serve as the primary entrance to the building. Specifically, the ground floor level would include: two separate lobbies to support independent living/assisted living and memory care services, respectively; a conference room, staff offices, and other service and support areas; and a lobby bistro area and a bistro terrace with outdoor seating located adjacent to the independent living/assisted living lobby. The bistro would not be publicly-accessible but would be available to residents and guests. The ground floor level within the

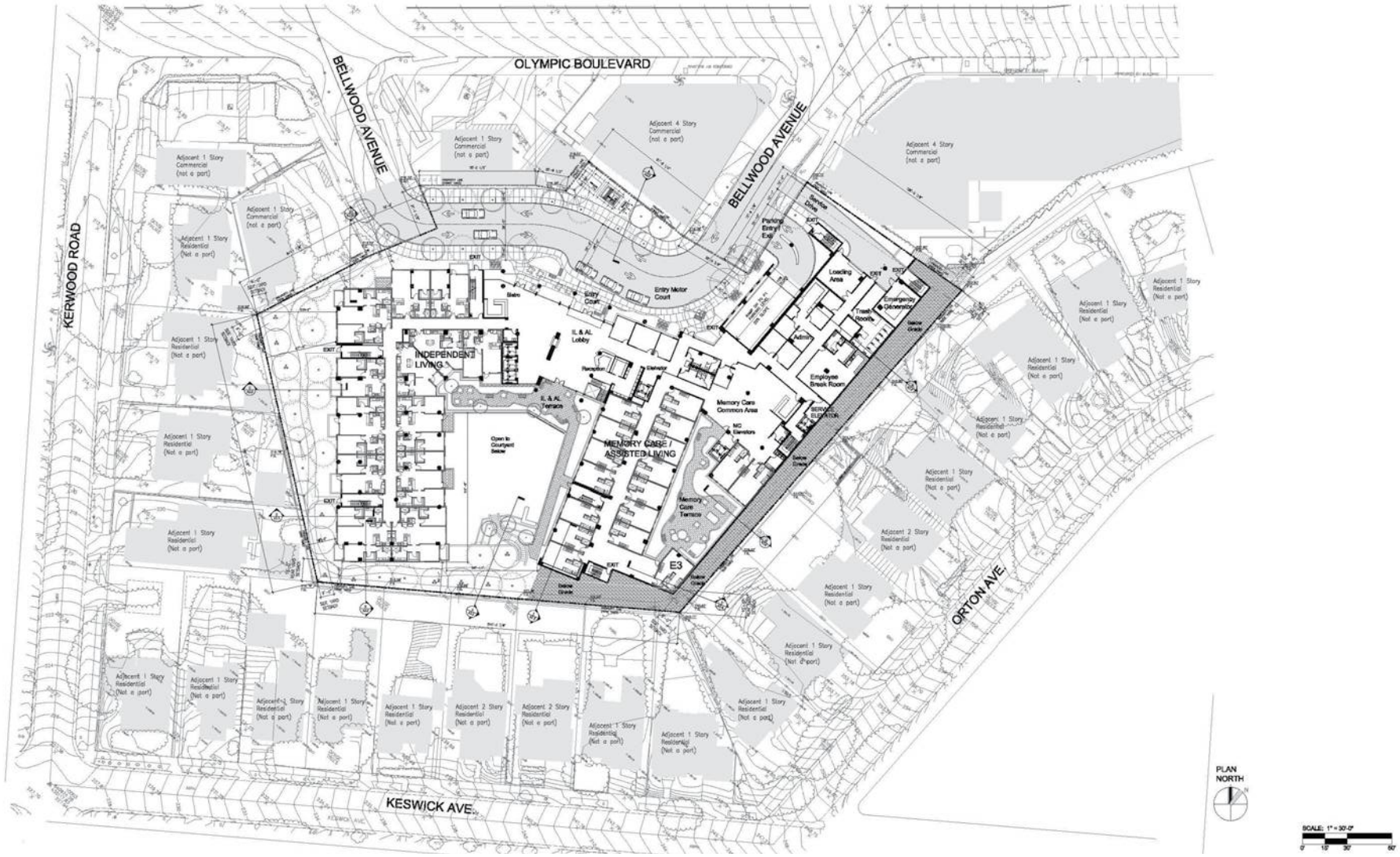

Figure II-3
Conceptual Site Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

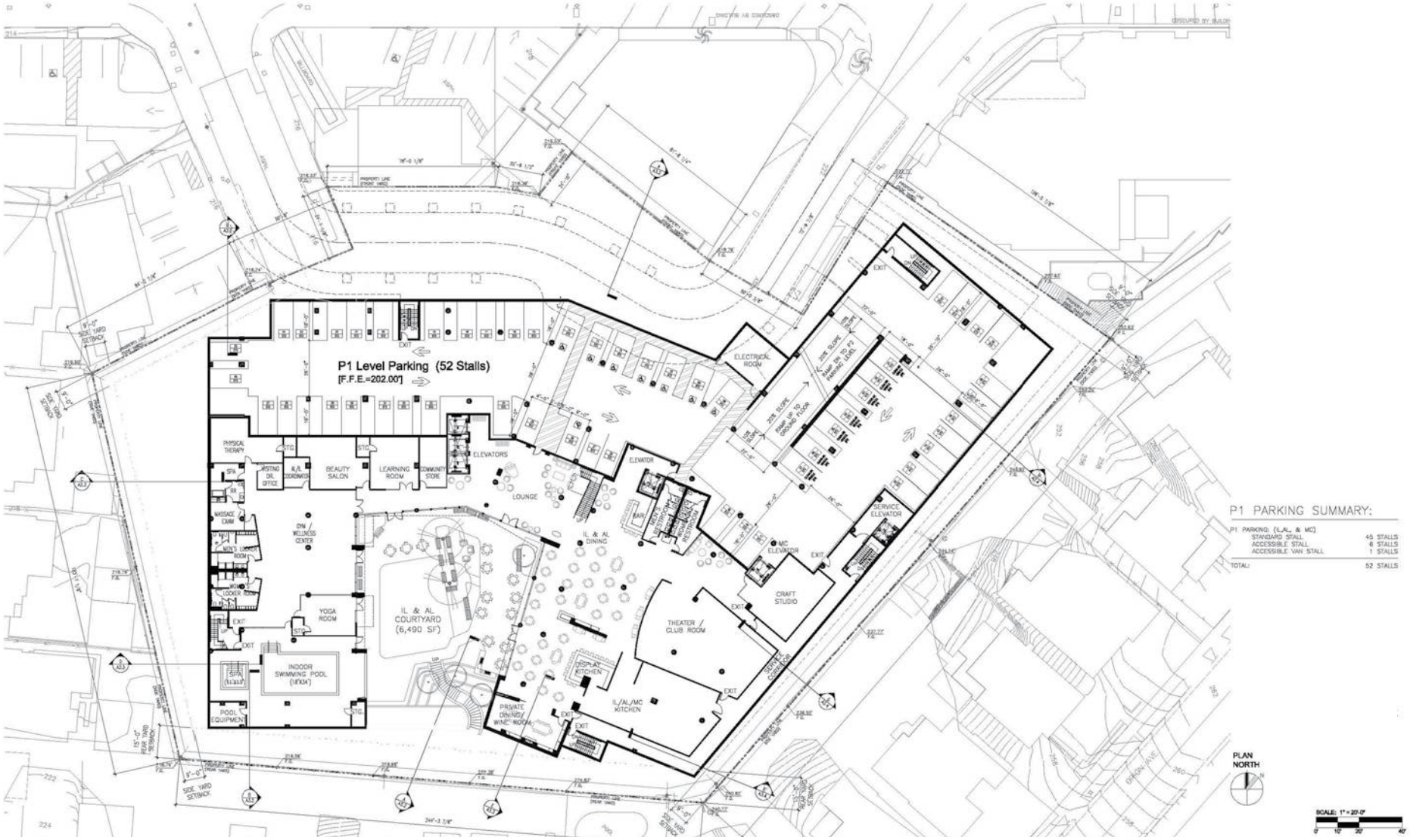

Figure II-4
P1 Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

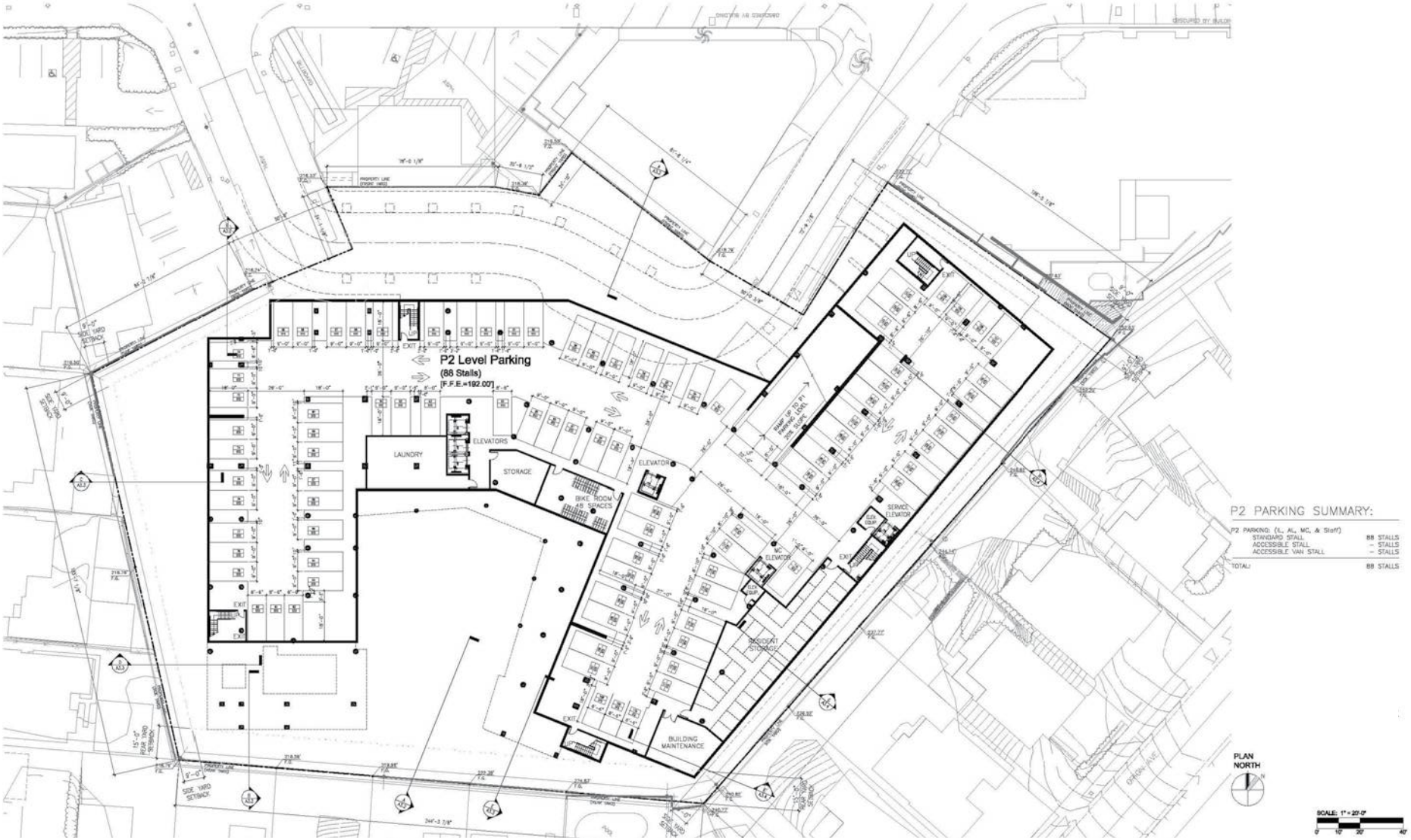

Figure II-5
P2 Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

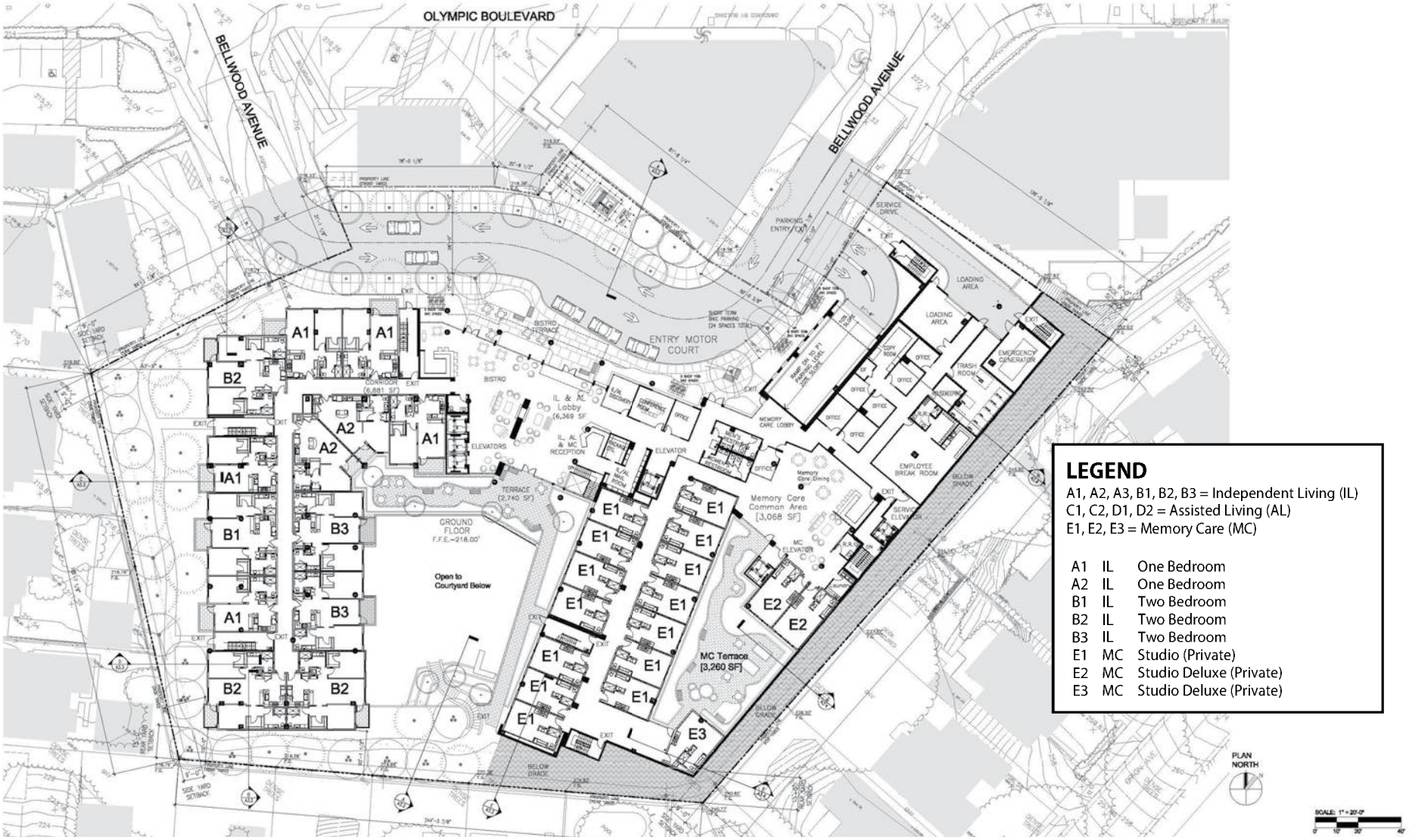

Figure II-6
Ground Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

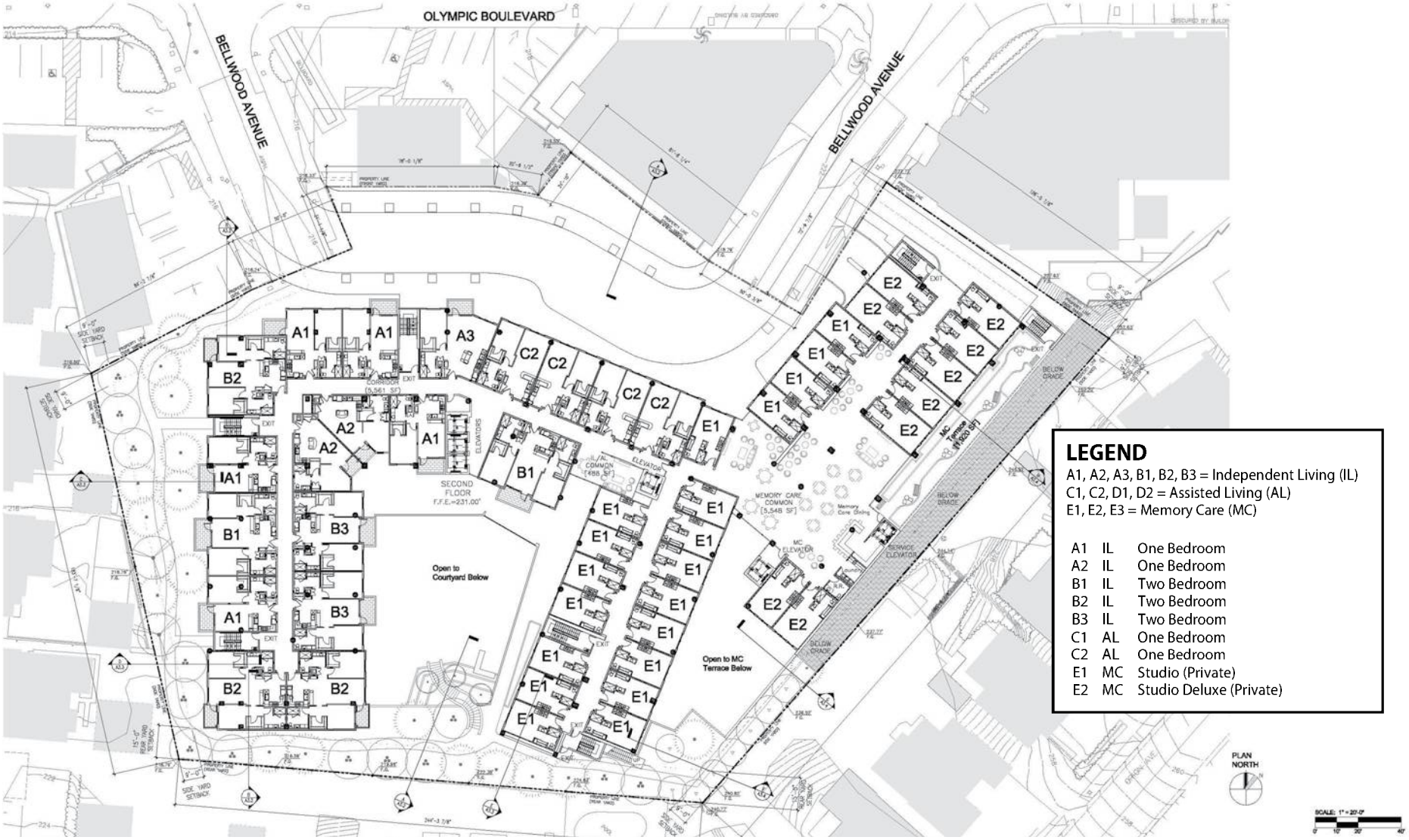

Figure II-7
Second Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

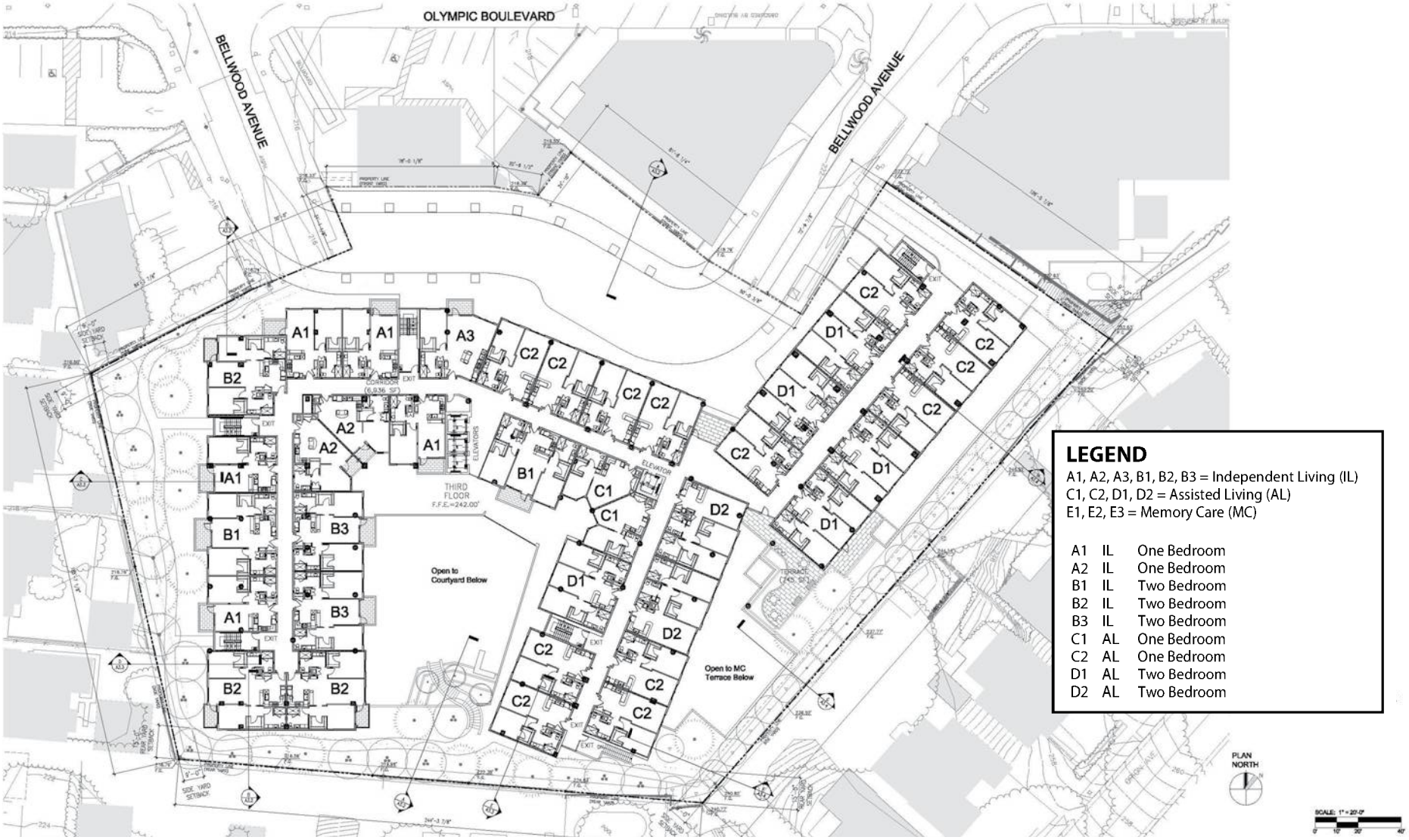

Figure II-8
Third Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

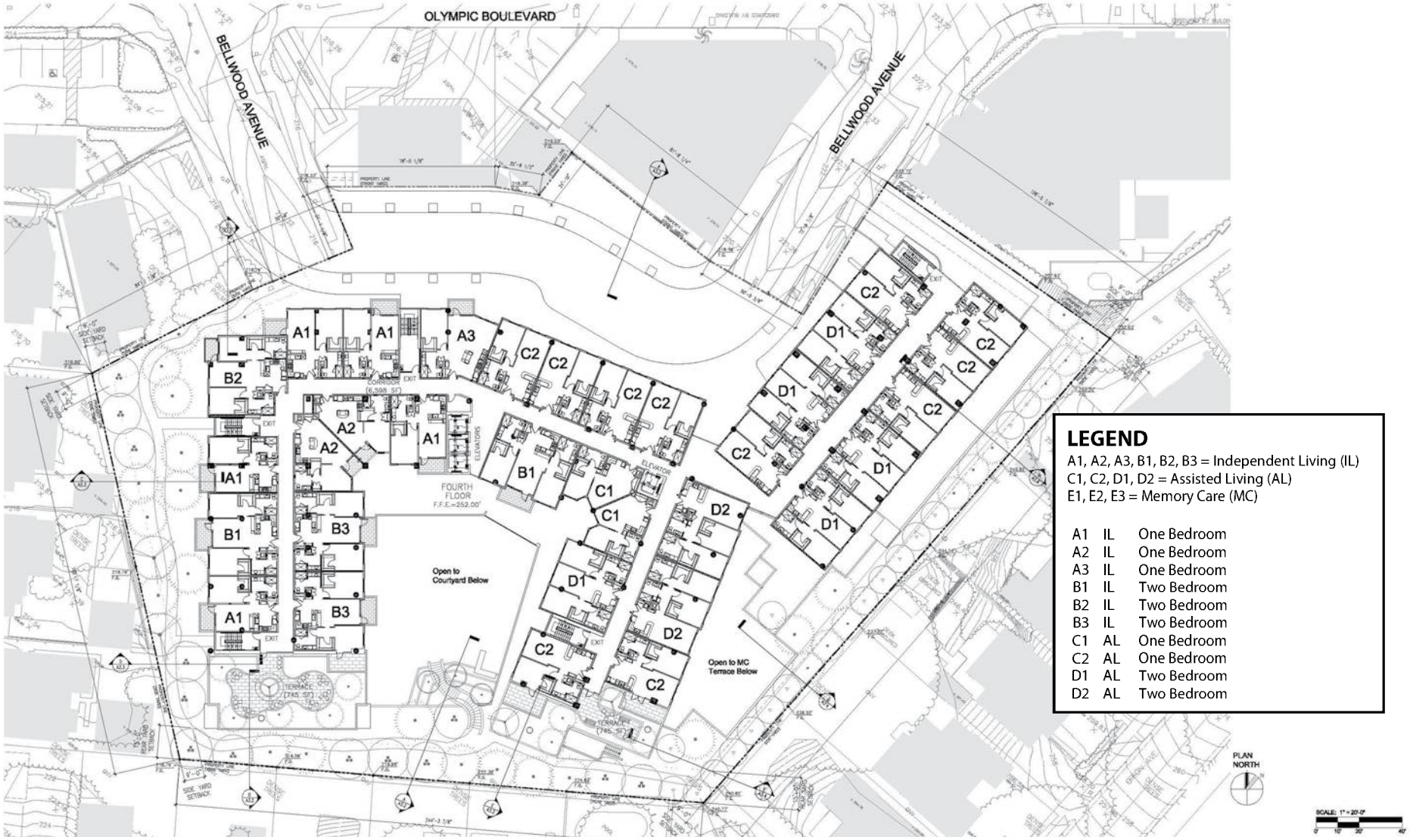

Figure II-9

Fourth Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

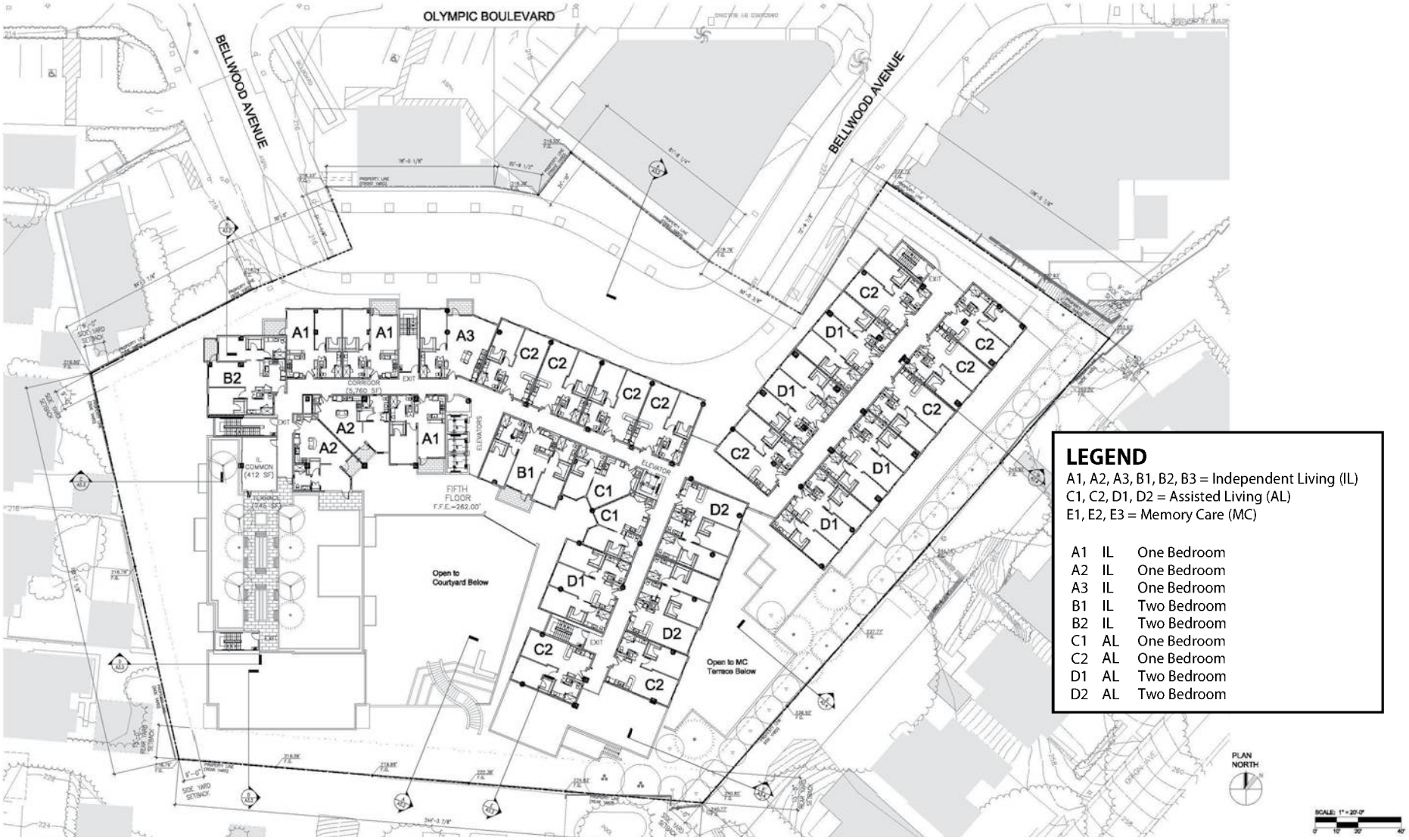

Figure II-10
Fifth Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

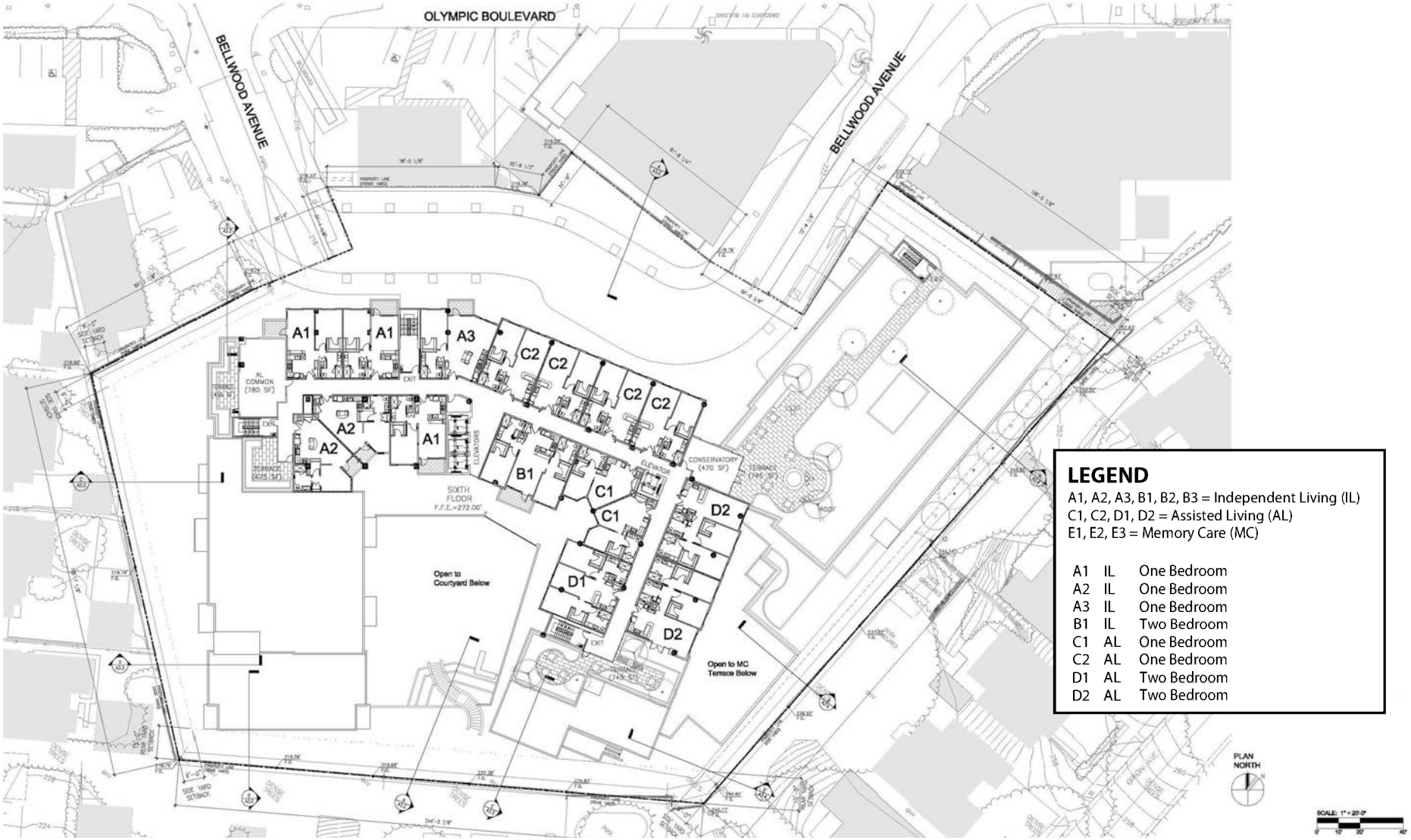

Figure II-11
Sixth Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

Table II-1
Summary of Proposed Senior Housing Residential Units

Unit Type	Independent Living	Assisted Living	Memory Care
Studio	0	0	46
One-Bedroom	43	51	0
Two-Bedroom	28	24	0
Total	**71**	**75**	**46**

Source: Eyestone Environmental, 2021.

eastern portion of the building would include: a memory care common area, dining area, and a memory care outdoor terrace with a portion of the memory care guest rooms oriented around these uses. As depicted in Figure II-6 on page II-12, independent living dwelling units would also be provided at the ground floor level of the western portion of the building along with an outdoor landscaped terrace for use by the independent living/assisted living residents. As illustrated in Figure II-7 through Figure II-11 on pages II-13 through II-17, the remainder of the independent living units, assisted living guest rooms, and memory care guest rooms would be provided on the second through sixth floors with additional common areas and terraces. Specifically, as shown in Figure II-7, an additional memory care common area and dining area along with the remaining memory care guest rooms would be provided on the second floor. In addition, the second floor would include independent living units and assisted living guest rooms. The third through sixth floors would include the remaining independent living units and assisted living guest rooms along with additional terraces.

As illustrated in Figure II-4 on page II-10, indoor common areas, including dining rooms, the gym, indoor pool and spa, wellness center, and several activity rooms would be located on the first subterranean level (P1). The central outdoor courtyard on Level P1 would be open to the sky, and the common indoor areas located within this level would have direct access to the central outdoor courtyard. These common areas would be separate from the parking area, and visitors who would park at the P1 level would not have direct access to the central courtyard or common areas. Stairs and elevators would be available from Level P1 to access the ground level above. Laundry facilities would be located on (P2).

Overall, the Project would feature a contemporary architectural style and would be designed to create a visually unified site with a new building designed to complement the existing surrounding uses and respond to the low- to mid-scale character of the surrounding area. As shown in Figure II-12 through Figure II-15 on pages II-19 through II-22, the proposed building would include building fenestration, a variety of surface materials, and a stepped design to create horizontal and vertical articulation, provide visual interest, and

Figure II-12
Conceptual Rendering—Birdseye View

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2019; Rios Clementi Hale Studios, 2019.

Figure II-13

Conceptual Rendering—View from Olympic Looking East

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2019; Rios Clementi Hale Studios, 2019.

Figure II-14
Conceptual Rendering—North Facade

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2019; Rios Clementi Hale Studios, 2019.

Figure II-15
Conceptual Rendering—View of Entrance

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2019; Rios Clementi Hale Studios, 2019.

complement the existing scale in the vicinity of the Project Site. In particular, building scale and massing is defined by varying massing and height components that break up the façade into distinct and offset planes. Building materials would include smooth troweled stucco, composite metal wall panels with wood finish, limestone panels and glass.

c. Open Space and Landscaping

As shown in Figure II-16 on page II-24, the various components and levels of the proposed building would be integrated by a series of landscaped courtyards and terraces provided at every floor of the building. Specifically, as illustrated in Figure II-17 on page II-25, Level P1 would include a central courtyard that would be open to the sky and include an outdoor kitchenette and barbecue stations, exercise lawn, garden seating area, flexible lounge seating, and outdoor dining seating. As provided in Figure II-18 on page II-26, additional terraces would be provided at the ground floor, including a large ground level terrace, the memory care terrace, and the bistro terrace. The ground level terrace would include bench and table seating, raised planters, and bistro tables. The memory care terrace would feature a lawn, raised vegetable planters, bench and table seating, and raised planters. The bistro terrace would include bistro tables. As shown in Figure II-18, additional benches and table seating would be provided at the entry plaza along Bellwood Avenue. Extensive landscaping that would serve as screening along the perimeter of the Project Site, as well as walkways around the westerly, southerly, and easterly setbacks, would also be provided at the ground level.

As depicted in Figure II-19 on page II-27, additional terraces would be provided on levels two through six. On the second floor, an additional terrace would be provided in the eastern portion of the building that would include benches and table seating, raised planters, and bistro tables. A smaller terrace would be provided on the third floor that would offer benches and table seating and bistro tables. Two larger terraces would be included on the fourth floor in the central and western portions of the building that would provide raised water features, benches and table seating, raised planters, and bistro tables. As illustrated in Figure II-19, additional landscaped terraces would be provided on the fifth and sixth levels that include raised water features, benches and table seating, raised planters, and bistro tables. Overall, as illustrated in Table II-2 on page II-28, the Project proposes to provide 14,630 square feet of open space and would exceed the Los Angeles Municipal Code (LAMC) required open space of 7,800 square feet. In addition to the 14,630 square feet of open space counted toward LAMC requirements, additional open space and landscaped areas would also be provided, including terraces for the memory care residents as well as the entry plaza, perimeter landscaping, private terraces, and rooftop/terrace landscaping as described above. Of the 96 ornamental trees mentioned above, approximately 65 trees would be removed as part of the Project, including eight street trees. All street trees to be removed would be subject to the replacement requirements of the Bureau of Street Services Urban Forestry Division, subject to the approval of the Board of Public Works.

Figure II-16
Conceptual Landscape Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2019; Rios Clementi Hale Studios, 2019

Figure II-17
P1 Landscape Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

Figure II-18
Ground Floor Landscape Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2019; Rios Clementi Hale Studios, 2019.

Figure II-19

Second to Sixth Floor Landscape Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

Table II-2
Summary of Proposed Open Space

Land Use	Quantity	Ratio	Open Space
Required			
One-Bedroom	43 du	100 sf	4,300 sf
Two-Bedroom	28 du	125 sf	3,500 sf
Total Open Space Required			7,800 sf
Proposed			
P1 Level Courtyard	—	—	6,490 sf
Ground Floor Terraces	—	—	2,740 sf
Third Floor Terrace	—	—	745 sf
Fourth Floor Terraces	—	—	1,490 sf
Fifth Floor Terrace	—	—	745 sf
Sixth Floor Terraces	—	—	2,420 sf
Total Open Space Proposed			14,630 sf

du = dwelling unit
sf = square feet
— = Not applicable
Source: Eyestone Environmental, 2021.

d. Access, Circulation, and Parking

Vehicular access would continue to be provided along Bellwood Avenue from Olympic Boulevard. However, as part of the Project, the portion of Bellwood Avenue that bisects the Project Site would be vacated and realigned. Public vehicular and pedestrian access would be maintained from both sides of Bellwood Avenue, and a vehicle turn-out adjacent to the building's lobby entrance would be provided along with sidewalk and streetscape improvements. Access to the subterranean parking would occur from one entry/exit driveway located along Bellwood Avenue near the northeastern boundary of the building, as shown in Figure II-3 on page II-9. Access for trash pickup and other freight vehicles would be provided via a service driveway located adjacent to the parking entry/exit driveway along Bellwood Avenue. Pedestrian access to the building would also be provided along Bellwood Avenue.

As illustrated in Table II-3 on page II-29, based on the proposed land uses, the Project would be required to provide 81 vehicle parking spaces (with application of the allowable reductions for senior independent living and assisted living spaces) and 72 bicycle parking spaces (24 short term spaces and 48 long term spaces). The Project proposes to provide up to 140 vehicle parking spaces, which would meet LAMC requirements and 72 bicycle parking spaces, which would meet LAMC requirements. These parking spaces would be located

Table II-3
Summary of Proposed Parking

Land Use	Quantity	Parking Ratio	Parking
Vehicle Parking			
Memory Care Guest Rooms[a]	46 rm	0.2 sp per bed	9 vehicle sp
Assisted Living Guest Rooms[b]	75 rm	0.5 sp per rm	37 vehicle sp
Senior Independent Dwelling Units[b]	71 du	0.5 sp per du	35 vehicle sp
Total Vehicle Parking Required			81 vehicle sp
Total Vehicle Parking Proposed			up to 140 vehicle sp
Bicycle Parking			
Residential Short-Term	—	1 sp per 10,000 sf	24 bicycle sp
Residential Long-Term	—	1 sp per 5,000 sf	48 bicycle sp
Total Bicycle Parking			72 bicycle sp

du = dwelling unit
rm = rooms
sf = square feet
sp = spaces
— = Not applicable
[a] *Per LAMC Section 12.21 A.4(d)(5).*
[b] *Per LAMC Sections 12.21 A.4(d)(5) and 12.21 A.4(u).*
Source: Eyestone Environmental, 2021.

within two subterranean parking levels that would extend to a depth of 30 feet. The Project also would comply with City requirements for providing electric vehicle charging capabilities and electric vehicle charging stations within the proposed parking area.

e. Lighting and Signage

Exterior lighting along the public areas, such as along the entry court, would include pedestrian-scale (i.e., lower to the ground, spaced closer together) fixtures. Exterior lighting would incorporate low-level exterior lights on the building and along pathways for security and wayfinding purposes. In addition, low-level lighting to accent signage, architectural features, and landscaping elements would be incorporated throughout the Project Site. Project lighting would be designed to minimize light trespass from the Project Site and would comply with all applicable LAMC requirements. Night lighting at the Project Site would be low profile and at the necessary intensity to provide a safe and walkable environment along walking paths. Roof terrace lighting would be of similar light levels, directed downward towards walkable surfaces, and shielded from view of the adjacent residential neighbors. All new street and pedestrian lighting within the public right-of-way would comply with applicable City regulations and would require approval from the Bureau of Street Lighting in order to maintain

appropriate and safe lighting levels on sidewalks and roadways while minimizing light and glare on adjacent properties.

Proposed signage would be designed to be aesthetically compatible with the proposed architecture of the building and with the requirements of the LAMC. Proposed signage would include mounted project identity signage and general wayfinding pedestrian signage. Wayfinding signs would be located at parking garage entrances, elevator lobbies, vestibules, and residential corridors.

f. Site Security

The following security features would also be incorporated in the Project design to enhance on-site safety:

- Design lobby areas to be visible from the public streets or entry ways.
- Design building entrances and exits, spaces around the building, and pedestrian walkways to be open and in view of surrounding sites.
- Design public spaces to be easily patrolled and accessed by safety personnel.
- Provide sufficient lighting of building entries and walkways to facilitate pedestrian orientation and clearly identify a secure route between parking areas and points of entry into the building.
- Provide sufficient lighting of parking areas, elevators, and lobbies to maximize visibility and reduce areas of concealment.
- Provide gated access to parking facilities.
- Provide panic buttons within the parking facilities and parking area elevators.
- Include access controls in the form of private on-site security, a closed-circuit security camera system, and keycard entry for the building and parking areas.
- Provide 24-hour security to monitor entrances and exits and manage and monitor the fire/life/safety systems.
- Display contact information for on-site security staff prominently throughout the Project Site.

g. Sustainability Features

The Project has been designed and would be constructed to incorporate environmentally sustainable building features and construction protocols required by the Los

Angeles Green Building Code and CALGreen. These standards would reduce energy and water usage and waste and, thereby, reduce associated greenhouse gas emissions and help minimize the impact on natural resources and infrastructure. The sustainability features to be incorporated into the Project would include, but would not be limited to WaterSense-labeled plumbing fixtures and weather-based controller and drip irrigation systems to promote a reduction of indoor and outdoor water use; Energy Star–labeled appliances; and water-efficient landscape design.

h. Anticipated Construction Schedule

Construction of the Project would commence with demolition of the existing buildings. This phase would be followed by grading and excavation for the subterranean levels. Building foundations would then be laid, followed by building construction, paving/concrete installation, and landscape installation. Project construction is anticipated to begin in 2021 and to be completed in 2023. The Project would require excavation up to a depth of 30 feet, and it is anticipated that an estimated 74,800 cubic yards of export material would be hauled from the Project Site. As discussed above, approximately 65 trees would be removed as part of the Project, including eight street trees.

Construction delivery/haul trucks would travel on approved truck routes between the Project Site and the San Diego Freeway (I-405) or the Santa Monica Freeway (I-10). Incoming trucks from the I-405 Freeway Southbound would exit the I-405 Freeway at Olympic Boulevard, heading north on Sawtelle Boulevard, and east on Olympic Boulevard, and turn south on Bellwood Avenue to the Project Site. Outgoing trucks to the I-405 Freeway would exit the Project Site onto Bellwood Avenue, head east on Olympic Boulevard, south on Century Park East, west on Pico Boulevard, north on Cotner Avenue to the I-405 northbound on-ramp. Incoming trucks from the I-10 Freeway Westbound would exit the I-10 Freeway at Overland Avenue, heading north on Overland Avenue, head east on Olympic Boulevard, and turn south on Bellwood Avenue to the Project Site. Outgoing trucks to the I-10 Freeway, would exit the Project Site onto Bellwood Avenue, head east on Olympic Boulevard, south on Century Park East, east on Pico Boulevard, and south on La Cienega Boulevard to the I-10 east bound on-ramp.

6. Requested Permits and Approvals

The list below includes the anticipated requests for approval of the Project. This Environmental Impact Report will analyze impacts associated with the Project and will provide environmental review sufficient for all necessary entitlements and public agency actions associated with the Project. The discretionary entitlements, reviews, permits and approvals required to implement the Project include, but are not necessarily limited to, the following:

- Pursuant to LAMC Section 14.3.1, an Eldercare Facility Unified Permit to permit an eldercare facility to be located on a lot within the R3-1 and C2-1VL Zones where the eldercare facility does not meet the use, area, height, and setback provisions of the Zones. Specifically, to permit the following:
  - an eldercare facility use on the R3-zoned portion of the Project Site;
  - density averaging across the Project Site;
  - a floor area ratio of up to approximately 2.77:1 to 3.2:1 averaged across the Project Site;
  - a maximum building height of 70 feet for a portion of the proposed building, in lieu of the 45 feet otherwise permitted in the R3-1 and C2-1VL Zones; and relief from transitional height limitations for the portions of the building located within the C2 Zone;
  - over-in-height retaining walls; and
  - access from a less restrictive zone to more restrictive zone for accessory uses such as parking.
- Pursuant to LAMC Section 12.24.W.1, a Conditional Use Permit for the on-site sale and service of a full line of alcoholic beverages for on-site consumption by Project residents and their visitors/guests as an incidental use in and accessory to the operation of the eldercare facility.
- Pursuant to LAMC Section 12.27.B, a Zone Variance for the sale and service of a full line of alcoholic beverages for on-site consumption by Project residents and their visitors/guests in the R3 Zone, as an incidental use in and accessory to the operation of the eldercare facility located in the R3 and C2 Zones;
- Pursuant to LAMC Sections 16.05 and 14.3.1.B, Site Plan Review for a development project consisting of 50 or more net new residential dwelling units and/or guest rooms;
- Pursuant to LAMC Sections 17.03 and 17.15, a Division of Land (Vesting Tentative Tract Map No. 82442) for the merger and resubdivision of the Project Site, merging all of the existing lots, including the merger of a portion of Bellwood Avenue; to designate yards such that the central northerly property line is designated as the front yard and the southernmost property line is designated as the rear yard and all other property lines would be designated as side yards[8]; and a Haul Route Approval; and

[8] *In the event the realigned portion of Bellwood Avenue through the Project Site is designated a public street and the building frontage along Bellwood Avenue is considered a front yard, a modification would be*
(Footnote continued on next page)

- Other discretionary and ministerial permits and approvals that may be deemed necessary, including, but not limited to, temporary street closure permits, grading permits, excavation permits, foundation permits, and building permits.

requested as part of the Eldercare Facility Unified Permit for a zero-foot setback in the limited portion of the building frontage that would be in the R3 zone consistent with the rest of the building's frontage in the C2 zone.

III. Environmental Setting

III. Environmental Setting

A. Overview of Environmental Setting

This section of the Draft EIR provides an overview of the existing regional and local setting in which the Project Site is located, and a brief description of the existing conditions at the Project Site. Detailed environmental setting information is provided in each of the environmental issue analyses found in Section IV (Environmental Impact Analysis) of this Draft EIR. In addition, Section II, Project Description, of this Draft EIR, provides additional information regarding existing conditions at the Project Site.

1. Project Location and Environmental Setting

The Project Site is located at 10328–10384 and 10341–10381 Bellwood Avenue in the West Los Angeles Community Plan (Community Plan) area of the City of Los Angeles (City). The Project Site is located approximately 5.5 miles east of the Pacific Ocean and 8.2 miles west of Downtown Los Angeles. The Project Site is irregularly shaped and is bisected by Bellwood Avenue. Adjacent to the Project Site, Bellwood Avenue is a U-shaped street that connects to Olympic Boulevard at each end. The Project Site includes parcels located generally north/west and east/south of Bellwood Avenue as well as the portion of Bellwood Avenue that bisects the Project Site.

a. On-Site Conditions

The Project Site is currently developed with several multi-family residential buildings and associated structures and parking. Specifically, the Project Site encompasses three multi-family residential developments totaling 43,939 square feet, including 112 units. These three multi-family residential developments include a two-story, 13-unit building located at 10341–10381 Bellwood Avenue; seven, two-story buildings with a total of 82 units located at 10328–10366 Bellwood Avenue; and six one-story bungalow court buildings located at 10368–10384 Bellwood Avenue with a total of 17 units. The existing buildings were constructed between approximately 1940 to 1951. The existing units are generally approximately 275 square feet to 375 square feet in size. Access to each of the multi-family residential developments is currently available via several driveways along Bellwood Avenue. Existing landscaping within the Project Site includes several shrubs and trees. Along the southern and eastern boundaries of the Project Site there is a grade difference ranging between approximately 14 feet to 42 feet from the adjacent single-family residential uses, such that the Project Site is situated below most of the adjacent

single-family residential uses. This sloping topography continues across the Project Site and its surroundings towards Olympic Boulevard.

b. Surrounding Uses

As previously described, the Project Site includes parcels located generally north/west and east/south of Bellwood Avenue. The portion of the Project Site located generally north/west of Bellwood Avenue is bounded by the Century Park hotel to the north, Bellwood Avenue and multi-family residential uses to the east and south, and a small commercial shopping center to the west that includes a cleaners and a smog check station. The portion of the Project Site located east and south of Bellwood Avenue is generally bounded by a Courtyard by Marriott hotel and Bellwood Avenue to the north, single-family residential uses to the east and south, and a beauty salon to the west. Beyond the immediate surroundings of the Project Site are additional commercial and office uses along Olympic Boulevard, including a Ralph's grocery store located to the north and a Goodwill Donation Center to the west. Single- and multi-family residential uses continue east and south of the Project Site. The Project Site is also located approximately 0.9 mile west of the Fox Studios Lot and approximately 0.5 mile south of the Century City commercial district.

2. Land Use Plans

City land use plans applicable to the Project Site include the following: the City of Los Angeles General Plan and Framework Element; the Community Plan; the West Los Angeles Transportation Improvement and Mitigation Specific Plan; Mobility Plan 2035; and the Citywide Urban Design Guidelines. Regional plans that are applicable to the Project Site include: the Southern California Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy; and the South Coast Air Quality Management District's 2016 Air Quality Management Plan.

The Project Site, which is comprised of 13 lots (including nine contiguous lots along the southerly side of Bellwood Avenue and four contiguous lots along the northerly side), has a Neighborhood Commercial General Plan land use designation and is zoned R3-1-O (Multiple Residential, Height District 1, Oil Drilling)[1] and C2-1VL-O (Commercial, Height District 1VL, Oil Drilling).[2] The R3 designation permits a wide variety of residential uses, including group dwellings, multiple dwellings, apartment houses, boarding houses, rooming houses, accessory uses and home occupations, senior independent housing, and assisted

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[1] *The R3 zoning applies to Lots 29-35 of Block 13 of Tract 7260.*

[2] *The C2 zoning applies to Lots 36-37 of Block 13 of Tract 7260 and Lots 10-13 of Block 14 of Tract 7260.*

living care housing. The C2 designation permits a wide variety of uses, including, but not limited to, eldercare facilities, multiple dwellings, various retail and restaurant spaces, auditoriums, automotive fueling and service stations, churches, drive-in businesses, hospitals, sanitariums, clinics, and schools. Height District 1 within the R3 Zone limits the height to 45 feet and the FAR to 3:1. Height District 1VL within the C2 Zone limits the height to 45 feet and three stories (except that there is no restriction on the number of stories for buildings used entirely for residential purposes) and the FAR to 1.5:1. The "O" designation indicates the Project Site is located within an Oil Drilling District where the drilling of oil wells or the production from the wells of oil, gases, or other hydrocarbon substances is permitted.

III. Environmental Setting

B. Related Projects

The California Environmental Quality Act (CEQA) Guidelines (Section 15130(a)) require that an Environmental Impact Report (EIR) discuss the cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." As set forth in CEQA Guidelines Section 15065(a)(3), "cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. In accordance with CEQA Guidelines Section 15130(a)(3), a project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. In addition, the lead agency is required to identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable.

CEQA Guidelines Section 15130(b) further provides that the discussion of cumulative impacts reflect "the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great of detail as is provided for the effects attributable to the project alone." Rather, the discussion is to "be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute."

CEQA Guidelines Section 15130(b) states that one of the following two elements is necessary to provide an adequate discussion of significant cumulative impacts:

(A) A list of past, present, and probable future projects producing related or cumulative impacts including, if necessary, those projects outside the control of the agency; or

(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.

Cumulative study areas are defined based on an analysis of the geographical scope relevant to each particular environmental issue. Therefore, the cumulative study area for each individual environmental impact issue may vary. For example, a cumulative land use impact generally may only affect the compatibility of uses in the vicinity of a project site, while a cumulative air quality impact may affect the entire South Coast Air Basin. The specific boundaries and the projected growth within those boundaries for the cumulative study area of each environmental issue are identified in the applicable environmental issue section in Section IV, Environmental Impact Analysis, of this Draft EIR.

A list of proposed development projects in the vicinity of the Project Site that could affect conditions in the Project area (e.g., by adding traffic and/or generating population increases) was prepared based on information obtained primarily from the City of Los Angeles Department of Transportation and the City of Los Angeles Department of City Planning. A total of six potential related development projects have been identified in the vicinity of the Project Site for inclusion in the cumulative impact analysis for this EIR. These related projects are in varying stages of the approval/entitlement/development process and reflect the diverse range of land uses in the vicinity of the Project Site. Specifically, the related projects comprise a variety of uses, including apartments, condominiums, office, studio, and retail uses.

The related projects are listed in Table III-1 on page III-6, which identifies the location of each related project along with the types of land uses. The locations of the related projects are shown in Figure III-1 on page III-7. It is noted that some of the related projects may not be built out by 2023 (i.e., the Project buildout year), may never be built, or may be approved and built at reduced densities. To provide a conservative forecast, the future baseline forecast assumes that the related projects are fully built out by 2023, unless otherwise noted.

Table III-1
Related Projects

No.	Project Name	Description	Unit/Area
1	Westfield Century City New Century Plan Project[a] 10250 Santa Monica Boulevard, 1801 Avenue of the Stars, and 1930 Century Park West Street	Condominiums	262 du
		Shopping Center	358,881 sf
2	Century City Center[b] 1950 S. Avenue of the Stars	Office	725,830 sf
		Retail	4,120 sf
		Mobility Hub	1,300 sf
3	Apartments 10306 W. Santa Monica Boulevard	Apartments	91–116 du
4	Century Plaza (Hyatt Regency Hotel) 2025 S. Avenue of the Stars	Condominiums	193 du
		Hotel	240 rm
		Office	117,647 sf
		Retail	93,814 sf
		Spa/Fitness	16,800 sf
		Restaurant	15,463 sf
5	Apartments 10400 W. Santa Monica Boulevard	Apartments	96 du
6	Fox Studios Master Plan 2016 10201 W. Pico Boulevard	Commercial (may include creative office, specialty space, stage space, and facility and utility support)	1,100,000 sf

du = dwelling units

rm = rooms.

sf = square feet

Related projects based on data from Los Angeles Department of Transportation and Department of City Planning as of June 12, 2019 (release of the Project's Notice of Preparation).

[a] *For the purposes of providing a more conservative analysis, the related project information reflects the project presented in the Environmental Impact Report for the New Century Park Project (Matrix Environmental, Certified June 2009). Since the certification of the EIR, the project was reduced by approximately 70,000 square feet and 242 residential units.*

[b] *For the purposes of providing a more conservative analysis, the related project information reflects the modified Century City Center project that was entitled in January 2015 as part of the Final Subsequent Environmental Impact Report. An alternative residential project was also entitled for this site and is considered in the analyses in this EIR where relevant.*

Source: Gibson Transportation Consulting, Inc., 2019.

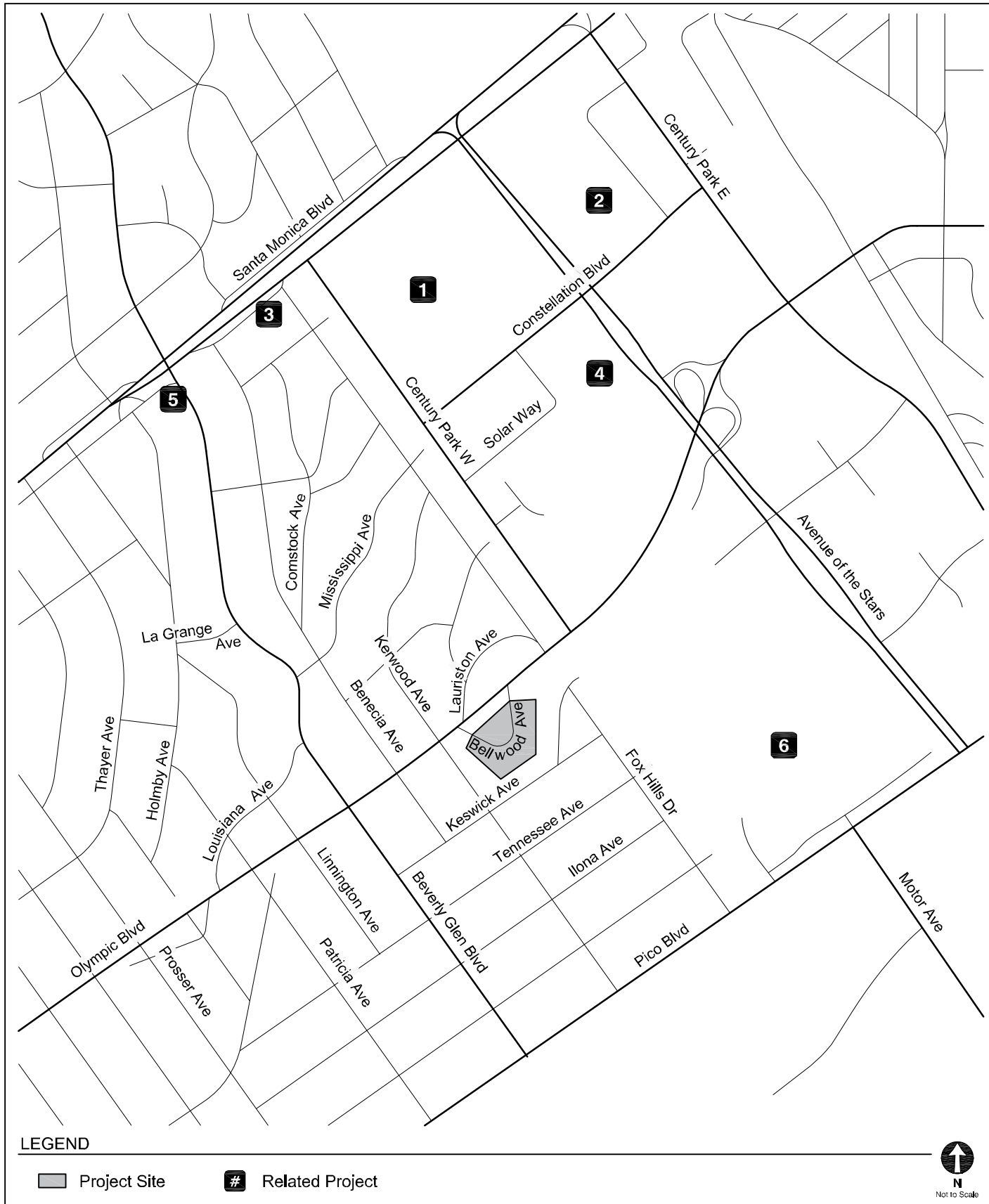

Figure III-1
Related Project Location Map

Source: Gibson Transportation Consulting, Inc., 2019.

IV. Environmental Impact Analysis

IV. Environmental Impact Analysis

A. Aesthetics

1. Introduction

As discussed in the Initial Study prepared for the Project, which is included in Appendix A of this Draft EIR, Senate Bill (SB) 743 [Public Resources Code (PRC) Section 21099(d)], which was adopted in 2013, established new rules for evaluating aesthetic and parking impacts under the California Environmental Quality Act (CEQA) for certain types of projects. Specifically, SB 743 (PRC Section 21099(d)) sets forth guidelines for evaluating project impacts for transit-oriented infill projects under CEQA, as follows: "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area (TPA) shall not be considered significant impacts on the environment."[1] The related City of Los Angeles Department of City Planning Zoning Information (ZI) File ZI No. 2452 provides further instruction concerning the definition of transit priority projects and that "visual resources, aesthetic character, shade and shadow, light and glare, and scenic vistas or any other aesthetic impact as defined in the City's CEQA Threshold Guide shall not be considered an impact for infill projects within TPAs pursuant to CEQA."[2] The City's Zone Information and Map Access System (ZIMAS) identifies a portion of the Project Site as located within a TPA (Lots 33-37 of Block 13 of Tract 7260 and 10-13 of Block 14 of Tract 7260) while other portions of the Project Site are not currently identified as located within a TPA (Lots 29-32 of Block 13 of Tract 7260). As such, the potential aesthetics impacts of the Project were evaluated in the Initial Study prepared for the Project and are discussed herein.

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[1] *PRC Section 21099 defines a "transit priority area" as an area within 0.5 mile of a major transit stop that is "existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." PRC Section 21064.3 defines "major transit stop" as "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." PRC Section 21099 defines an "infill site" as a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.*

[2] *City of Los Angeles Department of City Planning, Zoning Information File ZA No. 2452, Transit Priority Areas (TPAs)/Exemptions to Aesthetics and Parking Within TPAs Pursuant to CEQA.*

As evaluated in the Initial Study prepared for the Project, included in Appendix A of this Draft EIR, the Project's potential to have a substantial adverse effect on a scenic vista, the Project's potential to damage scenic resources within a scenic highway, and the Project's potential to create a new source of substantial light and glare were determined to result in no impact or a less-than-significant impact. The Initial Study also determined that the Project could potentially conflict with applicable zoning and other regulations governing scenic quality. Thus, the analysis in this section focuses on whether the Project would conflict with applicable zoning and other regulations governing scenic quality. Local plans, policies, and regulations governing scenic quality that are applicable to the Project Site include the City of Los Angeles General Plan Framework Element and Conservation Element, the West Los Angeles Community Plan (Community Plan), the Citywide Urban Design Guidelines, and the Los Angeles Municipal Code (LAMC).

2. Environmental Setting

a. Regulatory Framework

(1) City of Los Angeles General Plan

The City's General Plan sets forth goals, objectives, and programs to guide land use policies and to meet the existing and future needs of the community. The General Plan consists of a series of elements, including some that are pertinent to a discussion of aesthetics. These include the General Plan Framework Element and the Conservation Element, which are discussed below.

(a) General Plan Framework Element

The City of Los Angeles General Plan Framework Element (General Plan Framework) provides direction regarding the City's vision for future development throughout the City and includes an Urban Form and Neighborhood Design chapter to guide the design of future development. Although the General Plan Framework does not directly address the design of individual neighborhoods or communities, it embodies general neighborhood design policies and implementation programs that guide local planning efforts.

The Urban Form and Neighborhood Design Chapter of the General Plan Framework establishes a goal of creating a livable city for existing and future residents with interconnected, diverse neighborhoods through two design principles. First, "Urban Form" refers to the general pattern of building heights and development intensity and the structural elements that define the City physically, such as natural features, transportation corridors, activity centers, and focal elements. Second, "Neighborhood Design" refers to the physical character of neighborhoods and communities within the City. The Urban Form

and Neighborhood Design Chapter encourages growth in areas that have a sufficient base of both commercial and residential development to support transit service.

An analysis of the Project's consistency with the General Plan Framework is included in the impact analysis below and in Section IV.E, Land Use, of this Draft EIR.

(b) General Plan Conservation Element

Section 15 of the General Plan Conservation Element (Conservation Element), adopted in September 2001, establishes the objective and policy for the protection of natural and scenic vistas as aesthetic resources. As stated therein, it is the City's policy to encourage development that would protect significant landforms and unique scenic features, such as ridgelines, bluffs, mountains, and other unique natural or geologic features. In addition, the City would also encourage, to the greatest extent practical, the preservation of public views and access to these visual resources. The Project's consistency with Section 15 of the Conservation Element is discussed in the impact analysis below.

(2) West Los Angeles Community Plan

The Project Site lies within the West Los Angeles Community Plan area. The West Los Angeles Community Plan (Community Plan) is one of 35 community plans established for different areas of the City intended to implement the policies of the General Plan Framework.

While the primary aim of the Community Plan is to guide growth and development, some of the Community Plan's objectives pertaining to land use are also related to aesthetic issues. For example, the Community Plan calls for the preservation and enhancement of the varied and distinct residential character of existing residential neighborhoods. The Community Plan also encourages the preservation of existing open space and the preservation and restoration of cultural resources, neighborhoods, and landmarks.

The Project's consistency with applicable policies from the Community Plan that relate to scenic quality is discussed in the impact analysis below.

(3) Citywide Design Guidelines

The Citywide Design Guidelines serve to implement the General Plan Framework's urban design principles and are intended to be used by City Planning Department staff, developers, architects, engineers, and community members in evaluating project applications, along with relevant policies from the General Plan Framework and Community

Plans. By offering more direction for proceeding with the design of a project, the Citywide Design Guidelines illustrate options, solutions, and techniques to achieve the goal of excellence in new design. The Citywide Design Guidelines, which were adopted by the City Planning Commission in July 2013 and updated in October 2019, are intended as performance goals and not zoning regulations or development standards, and therefore do not supersede regulations in the LAMC. The Citywide Design Guidelines incorporate the goals of the City's Walkability Checklist, which was formerly used to assist in the evaluation of a project's conformance with the General Plan. The Project's consistency with the applicable guidelines included in the Citywide Design Guidelines is discussed in the impact analysis below.

(4) Los Angeles Municipal Code

Chapter 1 of the LAMC, referred to as the City of Los Angeles Planning and Zoning Code, sets forth regulations and standards regarding the allowable type, density, height, and design of new development projects. As provided in Section II, Project Description, of this Draft EIR, the Project Site has a Neighborhood Commercial General Plan land use designation and is zoned R3-1-O (Multiple Residential, Height District 1, Oil Drilling) and C2-1VL-O (Commercial, Height District 1VL, Oil Drilling). The R3 designation permits a wide variety of residential uses, including group dwellings, multiple dwellings, apartment houses, boarding houses, rooming houses, accessory uses and home occupations, senior independent housing, and assisted living care housing. The C2 designation permits a wide variety of uses, including, but not limited to, various retail and restaurant spaces, auditoriums, automotive fueling and service stations, churches, drive-in businesses, hospitals, sanitariums, clinics, and schools. Height District 1 within the R3 Zone limits the height to 45 feet and the floor-area ratio (FAR) to 3:1. Height District 1VL within the C2 Zone limits the height to 45 feet and two stories (except that there is no restriction on the number of stories for buildings used entirely for residential purposes) and the FAR to 1.5:1. The Project's consistency with the LAMC is evaluated in the impact analysis below.

b. Existing Conditions

(1) Scenic Vistas

As discussed in the Initial Study prepared for the Project, included in Appendix A of this Draft EIR, a scenic vista is generally described as a panoramic view (visual access to a large geographic area). Examples of panoramic views include an urban skyline, valley, mountain range, the ocean, or other water bodies. As described in the Initial Study, due to the highly urbanized and built out surroundings, there are no publicly available scenic vistas of any valued visual resources in the vicinity of the Project Site.

(2) Scenic Resources with a State Scenic Highway

As discussed in the Initial Study prepared for the Project, the Project Site is not located along a scenic highway as designated by the state. The nearest officially designated state scenic highway is California State Route 2 (SR-2). A portion of SR-2 runs along Santa Monica Boulevard north of the Project Site; however, the portion of the highway that is officially designated as a scenic highway is located approximately 25 miles northeast of the Project Site. The nearest officially eligible (not yet designated) state scenic highway is along California State Route 1 (SR-1), approximately 6 miles west of the Project Site, and the nearest City-designated scenic parkway is along Avenue of the Stars, approximately 0.6 mile northeast of the Project Site.

(3) Visual Character

(a) Project Site

The Project Site comprises an approximate 2.22-acre site that is currently developed with several multi-family residential buildings and associated structures and parking, and includes a portion of Bellwood Avenue that bisects the Project Site. Specifically, the Project Site encompasses three multi-family residential developments, which include a two-story building located at 10341–10381 Bellwood Avenue; seven, two-story buildings located at 10328–10366 Bellwood Avenue; and six, one-story bungalow court buildings located at 10368–10384 Bellwood Avenue. Landscaping within the Project Site includes 96 ornamental trees and shrubs, including eight street trees located within the portion of Bellwood Avenue proposed to be vacated and realigned, as well as ornamental trees whose trunks are on an adjacent property but have roots and canopies on the Project Site.

(b) Surrounding Area

As shown in the aerial photograph provided in Figure A-2 of Section II. Project Description, the Project Site is located in an urbanized area. The area surrounding the Project Site is characterized by a mixture of low- and mid-rise buildings occupied by a mix of residential and commercial uses. Specifically, the portion of the Project Site located generally north/west of Bellwood Avenue is bounded by the Century Park hotel (approximately four stories and 58 feet in height) to the north, Bellwood Avenue and multi-family residential uses to the east and south, and a small commercial shopping center to the west that includes a cleaners and a smog check station. The portion of the Project Site located east and south of Bellwood Avenue is generally bounded by a Courtyard by Marriott hotel (approximately four stories and 54 feet in height) and Bellwood Avenue to the north, single-family residential uses to the east and south, and a beauty salon to the west.

(4) Light and Glare

As described in the Initial Study prepared for the Project, the existing ambient nighttime lighting environment within the Project Site and vicinity is typical of a developed,

urban environment where the primary nighttime lighting sources include interior light spillage from buildings, vehicle headlights along roadways and in parking areas, signage, streetlamps, and security/parking lighting. Glare sources within the Project Site and vicinity include glass and metal, vehicle and building surfaces.

3. Project Impacts

a. Thresholds of Significance

In accordance with the State CEQA Guidelines Appendix G, except as provided in Public Resources Code Section 21099, the Project would have a significant impact related to aesthetics if it would:

Threshold (a): Have a substantial adverse effect on a scenic vista;

Threshold (b): Substantially damage scenic resources including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway;

Threshold (c): If the project is in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality;[3]

Threshold (d): Create a new source of substantial light and glare which would adversely affect day or nighttime views in the area.

As previously discussed, the Initial Study determined that the Project would result in no impact related to the Project's potential to have a substantial adverse effect on a scenic vista and the Project's potential to damage scenic resources within a scenic highway (Thresholds (a) and (b) above). In addition, the Initial Study concluded that the Project would have a less-than-significant impact related to the creation of a new source of substantial light and glare (Threshold (d) above). As such, the analysis below focuses on Threshold (c) listed above. This question was recently added to Appendix G and is therefore not specifically addressed in the 2006 L.A. CEQA Thresholds Guide. However, applicable guidelines and regulations is also a consideration included for the analysis of visual character/visual resources in the 2006 L.A. CEQA Thresholds Guide, consistent with the intent of Appendix G Threshold (c).

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[3] *The Project Site is in an urbanized area. As such, the applicable analysis is whether the Project would conflict with applicable zoning and other regulations governing scenic quality. Threshold (c) includes the following for projects in non-urbanized areas: In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point.)*

b. Methodology

The Project Site is located within an urbanized area. As such, in accordance with the threshold set forth in Appendix G of CEQA Guidelines, the analysis discusses whether the Project would conflict with applicable zoning and other regulations governing scenic quality. The determination of whether the Project conflicts with any applicable regulations governing scenic quality is based upon a review of the aforementioned planning and zoning documents that pertain to scenic quality. These include the City of Los Angeles General Plan Framework Element and Conservation Element, the Community Plan, the Citywide Urban Design Guidelines, and the LAMC. CEQA Guidelines Section 15125(d) requires that a draft EIR discuss any inconsistencies with applicable plans. A project is considered consistent with the provisions and general policies of an applicable City or regional plan if it is consistent with the overall intent of the plan and would not preclude the attainment of its primary goals. A project does not need to be in perfect conformity with each and every policy.[4]

c. Project Design Features

The following project design feature would be implemented as part of the Project:

Project Design Feature PDF A-1: Glass used in building façades shall be low-reflective or treated with an anti-reflective coating to minimize glare. Consistent with applicable energy and building code requirements, including Section 140.3 of the California Energy Code as may be amended, glass with coatings required to meet the Energy Code requirements shall be permitted.

d. Analysis of Project Impacts

Threshold (a): Would the Project have a substantial adverse effect on a scenic vista?

As discussed in Section VI, Other CEQA Considerations, of this Draft EIR, and evaluated in the Initial Study prepared for the Project, which is included as Appendix A of this Draft EIR, due to the highly urbanized and built out surroundings, there are no publicly available scenic vistas of any valued visual resources in the vicinity of the Project Site. **As determined in the Initial Study, development of the Project would not have the potential to substantially or adversely affect a scenic vista since none currently**

[4] *Sequoyah Hills Homeowners Association v. City of Oakland (1993) 23 Cal.App.4th 704, 719.*

exist. Therefore, impacts with respect to Threshold (a) would not occur. No further analysis is required.

Threshold (b): Would the Project substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

As discussed in Section VI, Other CEQA Considerations, of this Draft EIR, and evaluated in the Initial Study prepared for the Project, the Project Site is not located along a state scenic highway. **As determined in the Initial Study, the Project would not substantially damage scenic resources within a designated scenic highway as there are no scenic highways along the Project Site. Therefore, impacts with respect to Threshold (b) would not occur. No further analysis is required.**

Threshold (c): Would the Project conflict with applicable zoning and other regulations governing scenic quality?

(1) Impact Analysis

As previously discussed, a number of local plans, policies, and regulations related to scenic quality are applicable to the Project, including the City of Los Angeles General Plan Framework Element, the Conservation Element, the West Los Angeles Community Plan, the Citywide Urban Design Guidelines, and the LAMC. The Project's consistency with the general intent of these plans and regulations is provided below.

(a) General Plan

(i) Framework Element

The City of Los Angeles General Plan Framework Element provides direction regarding the City's vision for future development in the City and includes an Urban Form and Neighborhood Design chapter to guide the design of future development. As provided in Table 1 in Appendix B of this Draft EIR, one of the key objectives of the Urban Form and Neighborhood Design Chapter is to enhance the livability of all neighborhoods by upgrading the quality of development and improving the quality of the public realm (Objective 5.5). The Project would replace the existing multi-family residential units with an eldercare facility that would complement the uses surrounding the Project Site. Specifically, the Project would be designed to create a visually unified site with a new building designed to complement the existing surrounding uses and respond to the low- to mid-scale character of the surrounding area. As shown in the conceptual renderings provided in Figures II-12 through II-15 in Section II, Project Description, of this Draft EIR, the proposed building would include building fenestration; a variety of surface materials including trowel stucco, composite metal wall panels with wood finish, limestone panels,

and glass; and a stepped design to create horizontal and vertical articulation, provide visual interest, and maintain the existing scale in the vicinity of the Project Site. In particular, building scale and massing would be defined by varying massing and height components that break up the façade into distinct and offset planes.

The proposed landscaping, both within the Project Site and along the Project's frontage, would further contribute to a visually appealing residential development by providing screening and buffering between the adjacent uses, and would improve the quality of the public realm by promoting pedestrian activity and further activating the street adjacent to the Project. Specifically, the sidewalks along Bellwood Avenue would be enhanced with additional street trees. In addition, as shown in the Landscape Plan provided in Figure II-12 of Section II, Project Description, additional trees would also be planted within the Project Site, with rows of new trees along the western, southern and eastern perimeter of the Project Site. As further discussed in Table 1 in Appendix B of this Draft EIR, the Project would also support the City's policy to encourage that signage be designed to be integrated with the architectural character of the buildings and convey a visually attractive character. Specifically, proposed signage would be designed to be aesthetically compatible with the architecture proposed for the building as well as the surrounding area.

Overall, the Project would not conflict with the applicable objectives and policies that support the goals set forth in the Framework Element regarding scenic quality.

(ii) Conservation Element

As previously discussed, Section 15 of the Conservation Element establishes the objective and policy for the protection of natural and scenic vistas as aesthetic resources. As stated therein, it is the City's policy to encourage development that would protect significant landforms and unique scenic features, such as ridgelines, bluffs, mountains, and other unique natural or geologic features. In addition, the City would also encourage, to the greatest extent practical, the preservation of public views and access to these visual resources. As discussed in Table 1 in Appendix B of this Draft EIR, the Project is located within a highly urbanized area and there are no public views of scenic resources in the vicinity of the Project Site. Therefore, the Project would not obstruct or remove access to natural and scenic vistas in the area. Furthermore, the Project would not impact significant landforms or unique scenic features. Therefore, the Project would not conflict with objectives and policies in the Conservation Element regarding obstruction of existing scenic vistas or public views of visual resources.

(b) West Los Angeles Community Plan

As provided in Table 2 in Appendix B of this Draft EIR, the Project would not conflict with the applicable objectives and policies that support the goals of the West Los Angeles Community Plan related to scenic quality. Specifically, the Project would not conflict with Policy 1-3.1 requiring architectural compatibility and adequate landscaping for new multi-family residential development to protect the character and scale of existing residential neighborhoods. The vicinity of the Project Site is developed with a mix of commercial and residential uses. As shown in the aerial photograph provided in Figure II-2 of Section II. Project Description, the Project Site is bounded by the Courtyard by Marriott hotel (approximately four stories and 54 feet in height), and the Century Park hotel (approximately four stories and 58 feet in height) to the north; a small commercial shopping center that includes a cleaners and a smog check station, a beauty salon, and single-family residential uses to the west; and single-family residential uses to the east and to the south. Against this backdrop, the Project would replace the current low-rise and multi-family residential buildings within the Project Site with an eldercare facility 38 feet to 70 feet in height.

The Project would feature a contemporary architectural style that would be designed to create a visually unified site with a new building designed to complement the existing surrounding uses and respond to the low- to mid-scale character of the surrounding area. The proposed building would include building fenestration, a variety of surface materials, and a stepped design to create horizontal and vertical articulation, provide visual interest, and maintain the existing scale in the vicinity of the Project Site. In particular, the building's scale is defined by varying massing and height components that break up the façade into distinct and offset planes. Specifically, the building is designed so that the six-story portion is located nearest the commercial uses and four-story hotels to the north. The building steps down in height as it nears the southerly and westerly property lines nearest the residential uses. In addition, due to the surrounding topography, the easterly portion of the building, while technically five stories in height, is only three stories in height when viewed from the elevation of the adjacent properties to the east. Similarly, as properties to the south adjacent to the east wing of the building are at a higher elevation than the Project Site, when looking toward the five-story east wing of the building it appears as four stories. Roof deck terraces are provided at each building level as the building steps up in height to both reduce massing and create green spaces from the ground level to the top of the building. Extensive landscaping that would serve as screening along the perimeter of the Project Site would also be provided at the ground level.

Also, as discussed in Table 1 in Appendix B of this Draft EIR, the Project would not conflict with the design guidelines set forth in the Urban Design Chapter of the Community Plan. In particular, the Project would not conflict with the site planning guidelines regarding multi-family residential uses, to design such uses around a landscaped focal point or

courtyard to serve as an amenity for residents. As shown in Figure II-12 and Figure II-4 of Section II. Project Description, the Project would be constructed around a central courtyard on Level P1 that would be open to the sky through the extent of the building. The central courtyard would provide direct access to common indoor areas, which provide amenities to residents such as dining rooms, a gym, indoor pool and spa, wellness center, and several other activity rooms. Additional terraces would be provided at the ground floor, including a large ground level terrace, the memory care terrace, and the bistro terrace. These terraces would include amenities such as benches and tables, and the memory care terrace would include a lawn. Additional terraces would be provided on levels two through six that would include amenities such as benches, tables, raised planters, and water features.

(c) Citywide Design Guidelines

The Citywide Design Guidelines are intended as performance goals and not zoning regulations or development standards. Although each of the Citywide Design Guidelines should be considered in a project, not all objectives will be appropriate in every case. As discussed below, the Project would not conflict with the applicable objectives of the Citywide Design Guidelines for residential and commercial mixed-use projects.

Guideline 1: Promote a safe, comfortable and accessible pedestrian experience for all.

The proposed uses would be within a single building constructed around a central courtyard, which provides easy pedestrian connections within and around the Project Site. The ground floor of the proposed building would serve as the primary entrance to the building and would include two separate lobbies to support independent living/assisted living and memory care services, respectively. Indoor common areas including the dining rooms, the gym, indoor pool and spa, wellness center, and several activity rooms would be located on the first subterranean level (P1). Level P1 would be open to the central courtyard such that the common indoor areas would have direct access to the central outdoor areas. Stairs and elevators would be available from Level P1 to access the ground level above. In addition, the sidewalks along portions of Bellwood Avenue adjacent to the Project Site would be widened and additional street trees would be planted, promoting a safe and accessible pedestrian experience.

Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.

Vehicular access to the Project would be provided along Bellwood Avenue. Through public access would be maintained from both sides of Bellwood Avenue, and a vehicle turn-out adjacent to the building's lobby entrance would be provided along with sidewalk and streetscape improvements. Parking would be provided within two subterranean parking levels with access provided from one entry/exit driveway located along Bellwood

Avenue near the northern boundary of the building, separating the vehicular and pedestrian entrances. Access to the existing uses is currently available via five driveways along Bellwood Avenue. The Project would therefore reduce the number of driveways and eliminate existing surface parking areas, thereby reducing the interface between pedestrians and vehicles.

Guideline 3: Design projects to actively engage with streets and public space and maintain human scale.

The Project would provide for safe drop-off/pick-up areas and would include a vehicle turnout located adjacent to the Project Site lobby entrance for pick-up and drop-off. Sidewalks along portions of the realigned portion of Bellwood Avenue would be widened and new street trees would be planted. In addition, the sidewalks would continue to provide connections to the commercial uses along Olympic Boulevard. Exterior lighting along the public areas would include pedestrian-scale fixtures and elements. Project lighting would incorporate low-level exterior lights adjacent to buildings and along pathways for security and wayfinding purposes. A variety of landscaping, including planters and trees, would also be incorporated along the Bellwood frontage. In addition, pedestrian access to the building would also be provided along Bellwood Avenue where the building lobby entrance would be located. An outdoor bistro terrace would be provided adjacent to the lobby entrance, which would provide an active ground floor with pedestrian friendly improvements and actively engage with the street.

Guideline 4: Organize and shape projects to recognize and respect surrounding context.

As previously outlined, the Project design would complement the surrounding uses, which primarily consist of commercial and residential uses, and include two hotels, a shopping center, and single-family and multi-family residential uses. Currently, building heights in the surrounding area range from one story single-family residential homes to the east and south of the Project Site, to hotels that are approximately four stories tall to the north and west of the Project Site. The Project would replace three low-rise multi-family residential developments in multiple buildings with a single building ranging in height from 38 feet to 70 feet, or three to six stories. The building would feature a contemporary architectural style and would be designed to create a visually unified site to complement the existing surrounding uses and respond to the low- to mid-scale character of the surrounding area. The proposed building would include building fenestration, a variety of surface materials, and a stepped design to create horizontal and vertical articulation, provide visual interest, and respond to the existing scale in the vicinity of the Project Site. In particular, the building's scale is defined by varying massing and height components that break up the façade into distinct and offset planes. Specifically, the building is designed so that the six-story portion is located nearest the commercial uses and four-story hotels to the north. The building steps down in height as it nears the southerly and westerly property

lines nearest the residential uses. In addition, as discussed in Section II, Project Description, of this Draft EIR, there is a grade difference ranging between approximately 14 feet to 42 feet along the southern and eastern boundaries of the Project Site (i.e., Orton Avenue and Keswick Avenue), such that the Project Site is situated below most of the adjacent single-family residential uses. As such, due to the surrounding topography, the easterly portion of the building, while technically five stories in height, is only three stories in height when viewed from the elevation of the adjacent properties to the east. Similarly, as properties to the south adjacent to the east wing of the building are at a higher elevation than the Project Site, when looking toward the five-story east wing of the building it appears as four stories. Roof deck terraces are provided at each building level as the building steps up in height to both reduce massing and create green spaces from the ground level to the top of the building. In addition, extensive landscaping that would serve as screening along the perimeter of the Project Site would also be provided at the ground level.

Guideline 5: Express a clear and coherent architectural idea.

The Project would utilize distinguishable design features that would add visual interest while respecting the aesthetic character of the surrounding area. Fundamental to the design concept are the materials that would create the contemporary architectural style that would be designed to visually unify the Project and complement the existing surrounding uses. Building materials for the Project would include smooth troweled stucco, composite metal wall panels with wood finish, limestone panels, and glass. Architectural details would be incorporated to enhance scale and interest on the building's façades. The Project design would also alternate different textures, colors, materials, and distinctive architectural treatments as encouraged in the City's Urban Design Guidelines.

Guideline 6: Provide amenities that support community building and provide an inviting, comfortable user experience.

The Project would be constructed around a central courtyard on Level P1 that would be open to the sky through the extent of the building. The central courtyard would provide direct access to amenities for the residents including dining, a gym, indoor pool and spa, wellness center, and outdoor kitchenette and barbecue stations, exercise lawn, garden seating area, and flexible lounge seating. Various components and levels of the Project would be integrated by a series of landscaped courtyards and terraces. Additional terraces and courtyards would be provided at the ground floor, including a large ground level terrace, the memory care terrace, and the bistro terrace. These terraces and courtyards would include benches and table seating, raised planters, lawns, and bistro tables. Terraces would also be provided on levels two through six and would include landscaping. Therefore, the Project would provide amenities that provide an inviting and comfortable user experience.

Guideline 7: Carefully arrange design elements and uses to protect site users

The Project would provide for safe drop-off/pick-up areas and would include a vehicle turnout located adjacent to the Project Site lobby entrance for pick-up and drop-off. The proposed building would be constructed around a central courtyard that would be open to the sky. The assisted living guest rooms and memory care units would be generally concentrated within the eastern portion of the building, east of the courtyard; and the independent living units would be generally concentrated within the western portion of the building, to the west of the courtyard. The assisted living guest rooms would be located on the second through sixth floors generally within the central and east portions of the building, and the independent living dwelling units would be located on the first through sixth floors generally within the west and central portions of the building. The memory care guest rooms would be located on the first and second floors within the eastern portion of the building and would be separated from the independent living and assisted living components. This arrangement of buildings and uses would facilitate the flow of pedestrian activity within the Project Site. As a result, the Project would provide carefully arranged design elements and uses to Project Site users.

In addition, the Project would reduce the number of driveways and surface parking areas compared to existing conditions to minimize pedestrian-vehicular conflicts. The Project would also include lighting of building entries and walkways to provide for pedestrian orientation and to clearly identify a secure route between parking areas and points of entry into the commercial buildings.

(d) Los Angeles Municipal Code

As discussed in Section IV.E, Land Use, of this Draft EIR, the Project Site is zoned by the LAMC as R3-1-O (Multi Residential, Height District 1, Oil Drilling) and C2-1VL-O (Commercial, Height District 1VL, Oil Drilling). The R3 zone permits a wide variety of residential uses, including group dwellings, multiple dwellings, apartment houses, boarding houses, rooming houses, accessory uses and home occupations, senior independent living and assisted living care housing. The C2 zone permits a wide variety of uses, including, but not limited to eldercare facilities, multiple dwellings, various retail and restaurant spaces, auditoriums, automotive fueling and service stations, churches, drive-in businesses, hospitals, sanitariums, clinics, and schools. As discussed in Section IV.E, Land Use and Planning, of this Draft EIR, while the R3 zone allows for senior independent living and allows for assisted living care housing, it does not permit Alzheimer's/dementia care housing (e.g., memory care housing) or eldercare facilities by right. As such, the Project is requesting an Eldercare Facility Unified Permit pursuant to LAMC Section 14.3.1 to permit an eldercare facility to be located on a lot within the R3-1 and C2-1VL Zones where the eldercare facility does not meet the use, area, height, and setback provisions of the zones.

As it relates to aesthetics and views, the proposed Eldercare Facility Unified Permit would permit the maximum building height of 70 feet for a portion of the proposed building, in lieu of the 45 feet otherwise permitted in the R3-1 and C2-IVL Zones; and relief from transitional height limitations for the portion of the building located within the C2 Zone. The Eldercare Facility Unified Permit would also permit a FAR ranging from 2.77:1 to 3.2:1[5] averaged across the Project Site. However, as discussed throughout the analysis above, the design and location of the building would respond to the various building typologies in the area, and would, thereby, be generally consistent with surrounding development. The proposed Eldercare Facility Use Permit and resulting increase in FAR within portions of the Project Site would not result in a significant impact related to aesthetics or views because the change in scale would be moderated by a high degree of articulation created by fenestration; variations in building planes, rooflines, heights, and façade setbacks and projections; and a variety of surface materials to reduce the visual effect of the height and massing from public vantage points and provide a pedestrian scale adjacent to the public streets. Specifically, the building is designed so that the six-story portion is located nearest the commercial uses and four-story hotels to the north. The building steps down in height as it nears the southerly and westerly property lines nearest the residential uses. In addition, due to the surrounding topography, the easterly portion of the building, while technically five stories in height, is only three stories in height when viewed from the elevation of the adjacent properties to the east. Similarly, as properties to the south adjacent to the east wing of the building are at a higher elevation than the Project Site, when looking toward the five-story east wing of the building it appears as four stories.

With implementation of the requested approvals, impacts related to conflicts with the LAMC would be less than significant.

(e) Conclusion

Based on the discussion above, the Project would not conflict with the zoning and other regulations governing scenic quality, and impacts would be less than significant.

[5] *Based on buildable area (as defined in Los Angeles Municipal Code Section 12.03) of approximately 87,421 square feet. FAR is a calculation of the ratio of building square footage to buildable lot area. As the final buildable lot area may vary based on the ultimate configuration and designation of the realigned portion of Bellwood Avenue, the FAR may range from approximately 2.77:1 to 3.2:1; however, the square footage of the building would not change.*

(2) Mitigation Measures

Project-level impacts related to a conflict with applicable zoning and other regulations governing scenic quality would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to a conflict with applicable zoning and other regulations governing scenic quality were determined to be less than significant without mitigation. Therefore, no mitigation measures are required or included, and the impact level remains less than significant.

Threshold (d): Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

As discussed in Section VI, Other CEQA Considerations, of this Draft EIR, and evaluated in the Initial Study for the Project, which is included as Appendix A of this Draft EIR, with adherence to existing LAMC regulations, construction of the Project would not create a new source of substantial light which would adversely affect day or nighttime views in the area. Additionally, any glare generated during construction would be highly transitory and short-term, given the movement of construction equipment and materials within the construction area, and the temporary nature of construction activities. As such, construction of the Project would not create a new source of substantial glare which would adversely affect day or nighttime views in the area. **As determined in the Initial Study, Project-related construction activities would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area, and impacts would be less than significant. No further analysis is required.**

As also discussed in the Initial Study for the Project, which is included as Appendix A of this Draft EIR, sources of exterior lighting incorporated into the Project would include: low-level exterior lighting on the buildings and along pathways for security and wayfinding purposes; and low-level lighting to accent signage, architectural features, and landscaping elements. All Project lighting would be designed to minimize light trespass from the Project Site and comply with all LAMC requirements and standards and all new street and pedestrian lighting within the public right-of-way would comply with applicable City regulations and would require approval from the Bureau of Street Lighting in order to maintain appropriate and safe lighting levels on sidewalks and roadways while minimizing light and glare on adjacent properties.

With respect to glare, building materials for the Project would include smooth troweled stucco, composite metal wall panels with wood finish, limestone panels, and

glass. In addition, all parking would be provided in two subterranean parking levels. As such, there would be limited potential from glare associated with parked vehicles. Glass used in building facades would also be low reflective or treated with an anti-reflective coating to minimize glare. Further, the Project would incorporate additional perimeter landscaping to minimize views of the Project Site and any associated glare.

As determined in the Initial Study, Project operation would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Impacts with respect to Threshold (d) would be less than significant. No further analysis is required.

e. Cumulative Impacts

(1) Impact Analysis

As indicated in Section III, Environmental Setting, of this Draft EIR, there are six related projects in the vicinity of the Project Site. The nearest related project to the Project Site is Related Project No. 6, the proposed Fox Studios Master Plan, which is located approximately 0.2 mile east of the Project Site. This related project proposes commercial uses, which may include creative office space, new stages, and facility and utility support spaces. Related Project No. 6 would be confined to the boundaries of the existing Fox Studios and, due to the distance from the Project Site, could not combine with the Project to affect scenic quality in the immediate vicinity of the Project Site. As with the Project, Related Project No. 6 would also be required to comply with relevant regulations governing scenic quality through review by City regulatory agencies, and would be subject to CEQA review. In addition, as the Project would generally not conflict with applicable land use plans and policies that govern scenic quality, the Project would not incrementally contribute to cumulative inconsistencies with respect to such plans and policies. **Thus, Project impacts with regard to consistency with regulations governing scenic quality would not be cumulatively considerable, and cumulative impacts would be less than significant.**

(2) Mitigation Measures

Cumulative impacts to aesthetics would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts with regard to aesthetics were determined to be less than significant without mitigation. Therefore, no mitigation measures are required or included, and the impact level remains less than significant.

IV. Environmental Impact Analysis

B. Air Quality

1. Introduction

This section of the Draft EIR addresses the air emissions generated by construction and operation of the Project. The analysis also addresses the consistency of the Project with the air quality policies in the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan (AQMP) and the City of Los Angeles General Plan (General Plan). The analysis of Project-generated air emissions focuses on whether the Project would cause an exceedance of an ambient air quality standard or SCAQMD significance threshold. Calculation worksheets, assumptions, and model outputs used in the analysis are included in Appendix C of this Draft EIR.

2. Environmental Setting

a. Air Quality Background

The Project is located within the South Coast Air Basin (Air Basin), an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and San Diego County to the south. The Air Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the Coachella Valley area in Riverside County. The regional climate within the Air Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the Air Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, and industry.

Air pollutant emissions within the Air Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways.

Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect the public health and welfare. These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, which have been adopted for them. The national and state standards have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. The national and state criteria pollutants and the applicable ambient air quality standards are listed in Table IV.B-1 on page IV.B-3.

b. Air Pollution and Potential Health Effects

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants due to their presence in elevated concentrations in the atmosphere. The criteria air pollutants for which national and state standards have been promulgated and which are most relevant to current air quality planning and regulation in the Air Basin include ozone (O_3), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), sulfates, and hydrogen sulfide (H_2S). In addition, volatile organic compounds (VOCs) and toxic air contaminants (TACs) are of concern in the Air Basin. The health implications of each of these pollutants is briefly described below.

(1) Criteria Pollutants

(a) Ozone (O_3)

Ozone (O_3) is a gas that is formed when VOCs and nitrogen oxides (NO_X)—both byproducts of internal combustion engine exhaust—undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. An elevated level of O_3 irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. The people most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active

Table IV.B-1
Ambient Air Quality Standards

Pollutant	Averaging Period	California Standard[a,b]	Federal Standard[a,b]	SCAQMD Attainment Status[c]	
				California Standard[d]	Federal Standard[d]
Ozone (O_3)	1 hour	0.09 ppm (180 µg/m^3)	—	Non-Attainment	—
	8 hour	0.07 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Non-Attainment	Non-Attainment (Extreme)
Respirable Particulate Matter (PM_{10})	24 hour	50 µg/m^3	150 µg/m^3	Non-Attainment	Attainment
	Annual	20 µg/m^3	—		
Fine Particulate Matter ($PM_{2.5}$)	24 hour	—	35 µg/m^3	Non-Attainment	Non-Attainment (Serious)
	Annual	12 µg/m^3	12 µg/m^3		
Carbon Monoxide (CO)	1 hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	Attainment	Attainment
	8 hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)		
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm (339 µg/m^3)	0.10 ppm (188 µg/m^3)	Attainment	Unclassified/ Attainment
	Annual	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)		
Sulfur Dioxide (SO_2)	1 hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	Attainment	Unclassified/ Attainment
	3 hour	—	0.5 ppm (1,300 µg/m^3)		
	24 hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)		
	Annual	—	0.03 ppm (80 µg/m^3)		
Lead (Pb)	30-day average	1.5 µg/m^3	—	Attainment	Partial Non-Attainment[e]
	Rolling 3-month average	—	0.15 µg/m^3		
Sulfates	24 hour	25 µg/m^3	—	Attainment	—
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm (42 µg/m^3)	—	Unclassified	—

ppm = parts per million by volume

µg/m^3 = micrograms per cubic meter

[a] *An ambient air quality standard is a concentration level expressed in either parts per million or micrograms per cubic meter and averaged over a specific time period (e.g., 1 hour). The different averaging times and concentrations are meant to protect against different exposure effects. Some ambient air quality standards are expressed as a concentration that is not to be exceeded. Others are*

Table IV.B-1 (Continued)
Ambient Air Quality Standards

Pollutant	Averaging Period	California Standard[a,b]	Federal Standard[a,b]	SCAQMD Attainment Status[c]	
				California Standard[d]	Federal Standard[d]

expressed as a concentration that is not to be equaled or exceeded.

[b] *Ambient Air Quality Standards based on the SCAQMD's 2016 AQMP.*

[c] *"Attainment" means that the regulatory agency has determined based on established criteria, that the Air Basin meets the identified standard. "Non-attainment" means that the regulatory agency has determined that the Air Basin does not meet the standard. "Unclassified" means there is insufficient data to designate an area, or designations have yet to be made.*

[d] *California and Federal standard attainment status based on SCAQMD's 2016 AQMP.*

[e] *A small portion of Los Angeles county exceeded the Lead NAAQS during the 2007-2009 data period. However, in 2015, the SCAQMD lead monitoring network of eight regular monitoring sites and five source-specific sites did not exceed lead NAAQS. An attainment re-designation request is pending.*

Source: Eyestone Environmental, 2019.

outdoors, especially outdoor workers.[1] Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure to O_3 may lead to scarring of lung tissue and may lower lung efficiency.

(b) Particulate Matter (PM_{10} and $PM_{2.5}$)

The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than 10 microns (PM_{10}) and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), can enter the body and are trapped in the nose, throat, and upper respiratory tract. These small particulates could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

[1] *United States Environmental Protection Agency, Health Effects of Ozone Pollution, www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution, last updated June 30, 2019, accessed September 21, 2020.*

(c) Carbon Monoxide (CO)

Carbon Monoxide (CO) is primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

(d) Nitrogen Dioxide (NO_2)

Nitrogen Dioxide (NO_2) is a byproduct of fuel combustion and major sources include power plants, large industrial facilities, and motor vehicles. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), which reacts quickly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 absorbs blue light and results in a brownish-red cast to the atmosphere and reduced visibility. NO_2 also contributes to the formation of PM_{10}. Nitrogen Oxides irritate the nose and throat, and increase one's susceptibility to respiratory infections, especially in people with asthma. The principal concern of NO_X is as a precursor to the formation of O_3.

The adverse effects of ambient nitrogen dioxide air pollution exposure on health were reviewed in the 2008 USEPA Integrated Science Assessment for Oxides of Nitrogen—Health Criteria,[2] and more recently in the 2016 USEPA Integrated Science Assessment for Oxides of Nitrogen—Health Criteria.[3] The 2016 USEPA review noted the respiratory effects of NO_2, and evidence suggestive of impacts on cardiovascular health, mortality and cancer.

(e) Sulfur Dioxide (SO_2)

Sulfur oxides (SO_X) are compounds of sulfur and oxygen molecules. Sulfur Dioxide (SO_2) is the predominant form found in the lower atmosphere and is a product of burning sulfur or burning materials that contain sulfur. Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of SO_2 aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. SO_2 potentially causes wheezing, shortness of breath, and coughing. High levels of

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[2] *U.S. EPA, Integrated Science Assessment for Oxides of Nitrogen—Health Criteria (Final Report), 2008, Washington, DC, EPA/600/R-08/071, http://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=194645, accessed May 11, 2021.*

[3] *U.S. EPA, Integrated Science Assessment for Oxides of Nitrogen—Health Criteria (Final Report), 2016, Washington, DC, EPA/600/R-15/068, https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=310879, accessed May 11, 2021.*

particulates appear to worsen the effect of SO_2, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

(f) Lead (Pb)

Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system, and affects the oxygen-carrying capacity of blood.[4] Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

(g) Sulfates (SO_4^2)

Sulfates (SO_4^2) are the fully oxidized ionic form of sulfur. SO_4^2 occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized during the combustion process and subsequently converted to sulfate compounds in the atmosphere. Effects of SO_4^2 exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. SO_4^2 are particularly effective in degrading visibility, and, due to fact that they are usually acidic, can harm ecosystems and damage materials and property.

(h) Hydrogen Sulfide (H_2S)

Hydrogen Sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the state standard could result in exposure to a very disagreeable odor.

(2) Volatile Organic Compounds (VOCs)

Volatile Organic Compounds (VOCs) are typically formed from combustion of fuels and/or released through evaporation of organic liquids. Some VOCs are also classified by the state as TACs. While there are no specific VOC ambient air quality standards, VOC is a prime component (along with NO_X) of the photochemical processes by which such criteria

[4] *U.S. Environmental Protection Agency, Lead Air Pollution, www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution, accessed September 21, 2020.*

pollutants as O_3, NO_2, and certain fine particles are formed. They are, thus, regulated as "precursors" to formation of those criteria pollutants.

(3) Toxic Air Contaminants (TACs)

TACs refer to a diverse group of "non-criteria" air pollutants that can affect human health but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above but because their effects tend to be local rather than regional. TACs are classified as carcinogenic and noncarcinogenic, where carcinogenic TACs can cause cancer and noncarcinogenic TAC can cause acute and chronic impacts to different target organ systems (e.g., eyes, respiratory, reproductive, developmental, nervous, and cardiovascular).

The California Air Resources Board (CARB)[5] and the Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed," as a TAC in California. A complete list of these substances is maintained on CARB's website.[6]

Diesel particulate matter (DPM), which is emitted in the exhaust from diesel engines, was listed by the state as a TAC in 1998. DPM has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. DPM consists of fine particles (fine particles have a diameter less than 2.5 micrometer (µm)), including a subgroup of ultrafine particles (ultrafine particles have a diameter less than 0.1 µm). Collectively, these particles have a large surface area which makes them an excellent medium for absorbing organics. The visible emissions in diesel exhaust include carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and cancer-causing substances.

Exposure to DPM may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. DPM levels and resultant potential health effects may be higher in close proximity to heavily traveled roadways with substantial truck traffic or near industrial facilities. According to CARB, DPM exposure may lead to the following adverse health effects: (1) aggravated asthma; (2) chronic bronchitis; (3) increased respiratory and cardiovascular hospitalizations;

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[5] *CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both state and federal air pollution control programs within California.*

[6] *CARB, Toxic Air Contaminant Identification List, ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants, last reviewed by CARB July 18, 2011, accessed May 12, 2021.*

(4) decreased lung function in children; (5) lung cancer; and (6) premature deaths for people with heart or lung disease.[7,8]

c. Regulatory Framework

The Project Site and vicinity are subject to federal, state, and local air quality laws and regulations. A number of plans and policies have been adopted by various agencies that address air quality concerns. Those laws, regulations, plans, and policies that are relevant to the Project are discussed below.

(1) Criteria Pollutants

(a) Federal

The federal Clean Air Act (CAA) of 1963 was the first federal legislation regarding air pollution control and has been amended numerous times in subsequent years, with the most recent amendments in 1990. At the federal level, the United States Environmental Protection (USEPA) is responsible for implementation of some portions of the CAA (e.g., certain mobile source and other requirements). Other portions of the CAA (e.g., stationary source requirements) are implemented by state and local agencies.

The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the National Ambient Air Quality Standard (NAAQS). These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones.

The sections of the CAA which are most applicable to the Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions). Title I provisions are implemented for the purpose of attaining NAAQS. Table IV.B-1 on page IV.B-3 shows the NAAQS currently in effect for each criteria pollutant and their relative attainment status. The Air Basin fails to meet national standards for O_3 and $PM_{2.5}$ and, therefore, is considered a federal "non-attainment" area for these pollutants. In addition, Los Angeles

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[7] *CARB, Overview: Diesel Exhaust and Health, www.arb.ca.gov/research/diesel/diesel-health.htm, last reviewed by CARB April 12, 2016, accessed May 12, 2021.*

[8] *CARB, Fact Sheet: Diesel Particulate Matter Health Risk Assessment Study for the West Oakland Community: Preliminary Summary of Results, March 2008.*

County fails to meet the national standard for lead and, therefore, is considered a federal "non-attainment" area for lead.[9]

CAA Title II pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline and automobile pollution control devices are examples of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have been strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have been lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

(b) State

(i) California Clean Air Act

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practicable date. CARB is responsible for the coordination and administration of both state and federal air pollution control programs within California. In this capacity, CARB conducts research, sets state ambient air quality standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. Table IV.B-1 on page IV.B-3 includes the CAAQS currently in effect for each of the criteria pollutants, as well as other pollutants recognized by the state. As shown in Table IV.B-1, the CAAQS include more stringent standards than the NAAQS. The Air Basin fails to meet state standards for O_3, PM_{10} and $PM_{2.5}$ and, therefore, is considered a state "non-attainment" area for these pollutants.

(ii) California Code of Regulations

The California Code of Regulations (CCR) is the official compilation and publication of regulations adopted, amended or repealed by the state agencies pursuant to the Administrative Procedure Act (APA). The CCR includes regulations that pertain to air quality emissions. Specifically, Section 2485 in Title 13 of the CCR states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to 5 minutes at any location. In addition, Section 93115 in Title 17 of the

[9] *A small portion of Los Angeles County exceeded the Lead NAAQS during the 2007–2009 data period. However, in 2015, the SCAQMD lead monitoring network of eight regular monitoring sites and five source-specific sites did not exceed lead NAAQS. An attainment re-designation request is pending.*

CCR states that operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

(c) Regional

(i) South Coast Air Quality Management District (SCAQMD)

The SCAQMD shares responsibility with CARB for ensuring that all state and federal ambient air quality standards are achieved and maintained throughout the Air Basin.

To meet the CAAQS and NAAQS, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs). The 2016 AQMP incorporates the Southern California Association of Governments' (SCAG) 2016–2040 Regional Transportation Plan/ Sustainable Communities Strategy (2016 RTP/SCS) and updated emission inventory methodologies for various source categories. [10] The 2016 AQMP also includes new federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

The AQMP provides emissions inventories, ambient measurements, meteorological episodes, and air quality modeling tools. The AQMP also provides policies and measures to guide responsible agencies in achieving federal and State standards for healthful air quality in the Air Basin. It also incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources.

The SCAQMD adopts rules and regulations to implement portions of the AQMP. Several of these rules may apply to project construction or operation.

The following SCAQMD rules and regulations would be applicable to the Project:

- SCAQMD Rule 403 requires projects to incorporate fugitive dust control measures at least as effectively as the following measures:
  - Use watering to control dust generation during the demolition of structures;
  - Clean-up mud and dirt carried onto paved streets from the site;

[10] *The 2020–2045 RTP/SCS was approved in September. Consistency with the 2020–2045 RTP/SCS is therefore analyzed in Section IV.D, Land Use, of this Draft EIR. However, the 2016 AQMP relies on the 2016-2040 RTP/SCS and is therefore addressed for consistency with the 2016 AQMP.*

- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site;
- All haul trucks would be covered or would maintain at least 6 inches of freeboard;
- All materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of spillage or dust;
- Suspend earthmoving operations or implement additional watering to meet Rule 403 criteria if wind gusts exceed 25 mph; and
- The owner or contractor shall keep the construction area sufficiently dampened to control dust caused by construction and hauling, and at all times provide reasonable control of dust caused by wind. All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions.

- SCAQMD Rule 1113 limits the VOC content of architectural coatings.
- SCAQMD Rule 1121 specifies NO_X emission limits from residential type, natural-gas fired water heaters. This rule applies to water heaters with heat input rates less than 75,000 British Thermal Units (BTUs) per hour.
- SCAQMD Rule 1403 requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.
- SCAQMD Regulation XIII, New Source Review, requires new on-site facility nitrogen oxide emissions to be minimized through the use of emission control measures (e.g., use of best available control technology for new combustion sources such as boilers, emergency generators, and water heaters).

(ii) Southern California Association of Governments (SCAG)

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG coordinates with various air quality and transportation stakeholders in Southern California to ensure compliance with the federal and state air quality requirements, including applicable federal, state, and air district laws and regulations. As the federally designated Metropolitan Planning Organization (MPO) for the six-county Southern California region, SCAG is required by law to ensure that transportation activities "conform" to, and are

supportive of, the goals of regional and state air quality plans to attain the NAAQS. In addition, SCAG is a co-producer, with the SCAQMD, of the transportation strategy and transportation control measure sections of the 2016 AQMP. The development of the 2016 AQMP relies on population and transportation growth projections contained in SCAG's 2016–2040 RTP/SCS.

SCAG's 2016–2040 RTP/SCS, adopted on April 7, 2016, presents a long-term transportation vision through the year 2040 for the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. The 2016–2040 RTP/SCS places an emphasis on sustainability and integrated planning. These strategies include supporting projects that encourage diverse job opportunities for a variety of skills and education, recreation and culture and a full-range of shopping, entertainment and services all within a relatively short distance, while encouraging employment development around current and planned transit stations and neighborhood commercial centers. The 2016–2040 RTP/SCS also includes strategies focused on compact infill development, creating public spaces that are appealing, and expanding housing and transportation choices. The 2016–2040 RTP/SCS is expected to encourage more compact development in certain areas of the region and access to public transit, which is expected to reduce individual vehicle miles traveled and related emissions from vehicles.

On September 3, 2020, SCAG's Regional Council adopted its 2020–2045 RTP/SCS, Connect SoCal. Connect SoCal's core vision is to build upon and expand land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. On October 30, 2020, the California Air Resources Board (CARB) accepted SCAG's determination that the SCS met the applicable state greenhouse gas emission targets. Connect SoCal builds upon the prior RTP/SCS with new initiatives involving land use, transportation, and technology to achieve the region's pollutant reduction goals from the transportation and land use sections in accordance with SB 375 and the state's climate targets. As was the case under the prior RTP/SCS, the Project Site is located within a High-Quality Transit Area (HQTA) as designated by the 2020–2045 RTP/SCS, which are described as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours.[11]

(d) Local

Local jurisdictions, such as the City of Los Angeles, have the authority and responsibility to reduce air pollution through their police power and decision-making

[11] *SCAG, 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy, adopted September 2020, Exhibit 3.4.*

authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions.

The City's General Plan was prepared in response to California law, requiring that each city and county adopt a long-term comprehensive general plan. This plan must be integrated and internally consistent, and must present goals, objectives, policies, and implementation guidelines for decision makers to use. The General Plan includes an Air Quality Element, which was adopted on November 24, 1992, that serves to aid the City in attaining the state and federal ambient air quality standards at the earliest feasible date, while still maintaining economic growth and improving the quality of life. The planning area for the Air Quality Element covers the entire City, which encompasses an area of about 465 square miles. The Air Quality Element and the accompanying Clean Air Program acknowledge the interrelationships between transportation and land use planning in meeting the City's mobility and clean air goals. With the City's adoption of the Air Quality Element and the accompanying Clean Air Program, the City is seeking to achieve consistency with regional air quality growth management, mobility, and congestion management plans. The Air Quality Element sets forth the goals, objectives, and policies, which guide the City in the implementation of its air quality improvement programs and strategies.

The Air Quality Element establishes six goals:

- Good air quality in an environment of continued population growth and healthy economic structure;
- Less reliance on single-occupant vehicles with fewer commute and non-work trips;
- Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;
- Minimal impact of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation and air quality;
- Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels and the implementation of conservation measures including passive measures such as site orientation and tree planting; and
- Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

In accordance with CEQA requirements, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation. The City uses the SCAQMD's *CEQA Air Quality Handbook* and SCAQMD's supplemental online guidance/information for the environmental review of plans and development proposals within its jurisdiction.

(2) Toxic Air Contaminants (TAC)

(a) State

(i) Assembly Bill 1807

The California Air Toxics Program[12] was established in 1983, when the California Legislature adopted Assembly Bill (AB) 1807 to establish a two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air. In the risk identification step, CARB and OEHHA determine if a substance should be formally identified, or "listed," as a TAC in California. Since inception of the program, a number of such substances have been listed and include benzene, chloroform, formaldehyde, and particulate emissions from diesel-fueled engines, among others.[13] In 1993, the California Legislature amended the program to identify the 189 federal hazardous air pollutants (HAPs) as TACs.

In the risk management step, CARB reviews emission sources of an identified TAC to determine whether regulatory action is needed to reduce risk. Based on results of that review, CARB has promulgated a number of airborne toxic control measures (ATCMs), both for mobile and stationary sources. In 2004, CARB adopted an ATCM to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel PM and other TACs. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In addition to limiting exhaust from idling trucks, CARB adopted regulations on July 26, 2007 for off-road diesel construction equipment such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled, off-road diesel vehicles to reduce emissions by installation of diesel particulate filters and encouraging the replacement of

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[12] *CARB, California Air Toxics Program, www.arb.ca.gov/toxics/toxics.htm, last reviewed by CARB September 24, 2015, accessed May 11, 2021.*

[13] *CARB, Toxic Air Contaminant Identification List, ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants, last reviewed by CARB July 18, 2011, accessed May 11, 2021.*

older, dirtier engines with newer emission controlled models. Implementation is staggered based on fleet size, with the largest operators beginning compliance in 2014.[14]

The AB 1807 program is supplemented by the AB 2588 Air Toxics "Hot Spots" program, which was established by the California Legislature in 1987. Under this program, facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks if present. In 1992, the AB 2588 program was amended by Senate Bill (SB) 1731 to require facilities that pose a significant health risk to the community to reduce their risk through implementation of a risk management plan.

(ii) Air Quality and Land Use Handbook

CARB published the *Air Quality and Land Use Handbook* on April 28, 2005 (the "CARB Handbook"), to serve as a general guide for considering health effects associated with siting sensitive receptors proximate to sources of TAC emissions.[15] The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day;[16] (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines. If sensitive receptors are proposed to be sited within these distances, the CARB Handbook recommends performing additional site-specific assessments to evaluate the actual estimated health risks.

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[14] *CARB, In-Use Off-Road Diesel-Fueled Fleets Regulation Overview, Revised October 2016.*

[15] *CARB, Air Quality and Land Use Handbook, a Community Health Perspective, April 2005.*

[16] *In November 2012, the Los Angeles City Planning Commission (CPC) issued an advisory notice (Zoning Information File No. 2427) regarding the siting of sensitive land uses within 1,000 feet of freeways. The CPC deemed 1,000 feet to be a conservative distance to evaluate projects that house populations considered to be more at-risk from the negative effects of air pollution caused by freeway proximity. The CPC advised that applicants of projects requiring discretionary approval, located within 1,000 feet of a freeway and contemplating residential units and other sensitive uses (e.g., hospitals, schools, retirement homes, etc.) perform a Health Risk Assessment (HRA). The Project Site is not within 1,000 feet of a freeway and does not involve the development of residential units or other sensitive uses and, therefore, would not be subject to this notice and does not warrant the preparation of an HRA relative to the Project Site's proximity to a freeway.*

Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory was released in April of 2017 as a supplement to CARB's Handbook. It is intended to provide planners and other stakeholders involved in land use planning and decision-making with information on scientifically based strategies (e.g., solid barriers, vegetation buffers for pollutant dispersion, and indoor high efficiency filtration) to reduce exposure to traffic emissions near high-volume roadways in order to protect public health and promote equity and environmental justice.

(b) Regional

Pursuant to California AB 1807, which directs the CARB to identify substances as TACs and adopt ATCMs to control such substances, the SCAQMD has adopted numerous rules (primarily in Regulation XIV) that specifically address TAC emissions. SCAQMD has adopted two rules to limit cancer and non-cancer health risks from facilities located within its jurisdiction. Rule 1401 (New Source Review of Toxic Air Contaminants) regulates new or modified facilities, and Rule 1402 (Control of Toxic Air Contaminants from Existing Sources) regulates facilities that are already operating. Rule 1402 incorporates requirements of the AB 2588 program, including implementation of risk reduction plans for significant risk facilities. Significant risk facilities are those facilities which have an increased cancer risk exceeding 10 in 1 million or a total hazard index exceeding 1.0. Examples include landfills, refineries and oil production facilities.

d. Existing Conditions

(1) Regional Air Quality

The Southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Air Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors, such as wind, sunlight, temperature, humidity, rainfall, and topography, affect the accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential.

The greatest air pollution throughout the Air Basin occurs from June through September. This condition is generally attributed to the large amount of pollutant emissions, light winds, and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, thus causing elevated air pollution levels. Pollutant concentrations in the Air Basin vary with location, season, and time of day. O_3 concentrations, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far

inland areas of the Air Basin and adjacent desert. Over the past 30 years, substantial progress has been made in reducing air pollution levels in Southern California. However, the Air Basin still fails to meet the national standards for O_3 and $PM_{2.5}$. In addition, Los Angeles County still fails to meet the national standard for lead.

SCAQMD has the responsibility for ensuring that all national and state ambient air quality standards are achieved and maintained throughout the Air Basin. To meet the standards, SCAQMD has adopted a series of AQMPs. The 2016 AQMP includes strategies to ensure that rapidly approaching attainment deadlines are met and that public health is protected to the maximum extent feasible. The most significant air quality challenge in the Air Basin is to reduce NO_X emissions[17] sufficiently to meet the upcoming ozone standard deadlines. The 2016 AQMP provides a baseline year 2012 inventory of 512 tons per day (tpd) of NO_X and modeling results show that NO_X emissions are projected to be 214 tpd in the 8-hour ozone attainment year of 2031, due to continued implementation of already adopted regulatory actions ("baseline emissions"). The 2016 AQMP suggests that total Air Basin emissions of NO_X must be reduced to 96 tpd in 2031 to attain the 8-hour ozone standard. Although the existing air regulations and programs will continue to lower NO_X emissions in the region, an additional 55 percent in the year 2031 are necessary to attain the 8- hour ozone standard.[18,19]

The overall control strategy is an integral approach relying on fair-share emission reductions from federal, state and local levels. The 2016 AQMP is composed of stationary and mobile source emission reductions from traditional regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile source strategies and reductions from federal sources, which include aircraft, locomotives and ocean-going vessels. These strategies are to be implemented in partnership with CARB and U.S. EPA. In addition, the SCAG 2016–2040 RTP/SCS[20] includes transportation programs, measures, and strategies generally designed to reduce VMT, which are contained in the AQMP.

Pursuant to California Health and Safety Code Section 40460, SCAG has the responsibility of preparing and approving the portions of the AQMP relating to the integration of regional land use programs, measures, and strategies. SCAQMD combines its portion of the Plan with those prepared by SCAG. The Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and Transportation Control Measures

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[17] *NOx emissions are a precursor to the formation of both ozone and secondary $PM_{2.5}$.*

[18] *Estimates are based on the inventory and modeling results and are relative to the baseline emission levels for each attainment year (see Final 2016 AQMP for detailed discussion).*

[19] *SCAQMD, Final 2016 AQMP, 2017, p. ES-2.*

[20] *SCAG, Connect SoCal, What is Connect SoCal?, http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx, accessed May 12, 2021.*

(TCMs), included as Appendix IV-C of the 2016 AQMP/SIP for the Basin, are based on SCAG's 2016–2040 RTP/SCS.

(a) AQMP—Long-Term Trends

The 2016 AQMP forecasts the 2031 emissions inventories "with growth" based on SCAG's 2016–2040 RTP/SCS. The region is projected to see a 12-percent growth in population, 16-percent growth in housing units, 23-percent growth in employment, and 8-percent growth in vehicle miles traveled between 2012 and 2031.

Despite this regional growth, air quality has improved substantially over the years, primarily due to the impacts of air quality control programs at the local, state and federal levels. The graphic included in Figure IV.B-1 on page IV.B-19 shows the percent change in air quality along with demographic data for the 4-county region from the 2016 AQMP. In particular, Figure IV.B-1 illustrates the trends since 1990 of the 8-hour ozone levels, the 1-hour ozone levels, and annual average $PM_{2.5}$ concentrations (since 1999), compared to the regional gross domestic product, total employment and population. Human activity in the region has an impact on achieving reductions in emissions. However, the ozone and particulate matter levels continue to trend downward as the economy and population increase, demonstrating that it is possible to maintain a healthy economy while improving public health through air quality improvements.[21]

(b) Multiple Air Toxics Exposure Study (MATES)

The SCAQMD has released the Multiple Air Toxics Exposure Study (MATES-IV).[22] The MATES-IV study was aimed at estimating the cancer risk from toxic air emissions throughout the Air Basin by conducting a comprehensive monitoring program, an updated emissions inventory of TACs, and a modeling effort to fully characterize health risks for those living in the Air Basin. The MATES-IV study concluded that the average carcinogenic risk from air pollution in the Air Basin is approximately 420 in one million over a 70-year duration. Mobile sources (e.g., cars, trucks, trains, ships, aircraft, etc.) represent the greatest contributors. Approximately 68 percent of the risk is attributed to diesel particulate emissions, approximately 21 percent to other toxics associated with mobile sources (including benzene, butadiene, and carbonyls), and approximately 11 percent of all carcinogenic risk is attributed to stationary sources (which include large industrial

[21] *SCAQMD, Final 2016 AQMP, 2017, p. 1-6, www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp, accessed May 11, 2021.*

[22] *SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV) Final Report, May 2015.*

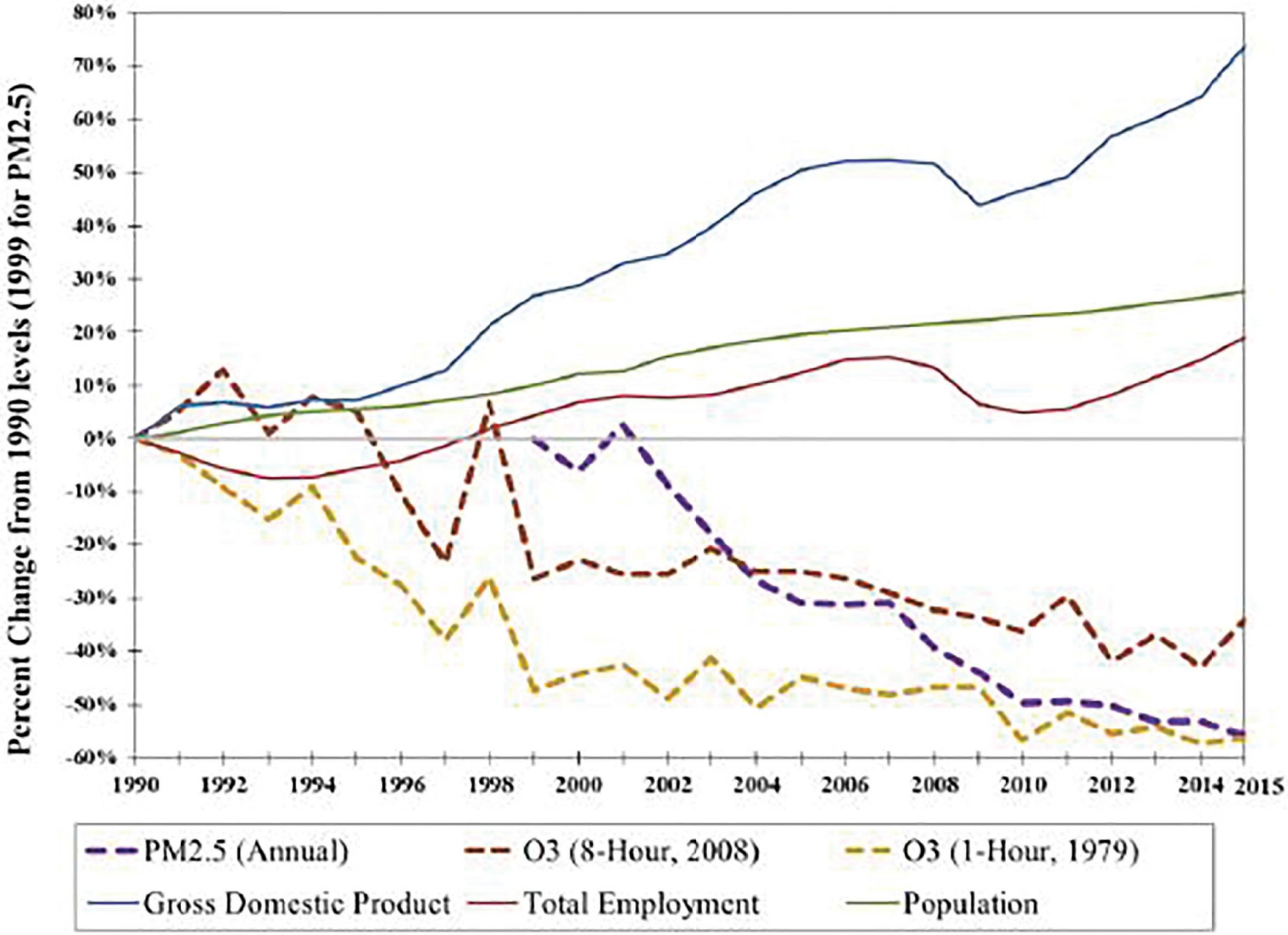

Figure IV.B-1
Ozone Trends

Source: SCAQMD, 2016.

operations, such as refineries and metal processing facilities, as well as smaller businesses, such as gas stations and chrome plating).[23]

As part of the MATES-IV study, the SCAQMD prepared a series of maps that shows regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of an ongoing effort to provide insight into relative risks. The maps' estimates represent the number of potential cancers per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years) in parts of the area. The MATES-IV map is the most recently available map to represent existing conditions near the Project area. The estimated cancer risk for the vast majority of the urbanized area within the Air Basin ranges from 200 to over 1,200 cancers per million over a 70-year duration.[24] Generally, the risk from air toxics is lower near the coastline and higher risks are concentrated near large diesel sources (e.g., freeways, airports, and ports).

(2) Local Air Quality

Air pollutant emissions are generated in the local vicinity by stationary and area-wide sources, such as commercial and industrial activity, space and water heating, landscape maintenance, consumer products, and mobile sources primarily consisting of automobile traffic. Motor vehicles are the primary source of pollutants in the local vicinity.

(a) Existing Pollutant Levels at Nearby Monitoring Stations

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin and has divided the Air Basin into 38 source receptor areas (SRAs) in which 31 monitoring stations operate. Figure IV.B-2 on page IV.B-21 shows the locations of the SRAs located in Los Angeles County. The Project Site is located within SRA 2, which covers the West Los Angeles area. The monitoring station most representative of the Project Site is the West Los Angeles–VA Hospital Station, located at Wilshire Boulevard and Sawtelle Boulevard in the City of Los Angeles, approximately 2 miles northwest of the Project Site. Criteria pollutants monitored at this station include PM_{10}, $PM_{2.5}$, O_3, CO, NO_2, lead, and sulfate. Table IV.B-2 on page IV.B-22 identifies the national and state ambient air quality standards for relevant air pollutants along with the ambient pollutant concentrations that have been measured at these stations through the period of 2016–2018.

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[23] *SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV) Final Report, May 2015.*

[24] *SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-IV), MATES IV Interactive Carcinogenicity Map, 2015.*

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

21865 Copley Drive, Diamond Bar, CA 91765-4182
Information: 1-800-CUT-SMOG (1-800-288-7664)
Internet: http://www.aqmd.gov

Air Quality Reporting

Since 1977, the South Coast Air Quality Management District has served as the local government agency responsible for measuring, reporting and taking steps to improve air quality.

To inform the AQMD's 15 million residents about air quality conditions, the AQMD issues an air quality forecast each day and reports current air quality conditions for each numbered Monitoring Area and General Forecast Area depicted here.

This air quality information is transmitted to the public through newspapers, television, radio and pager services, through faxes to schools, through recorded messages on the AQMD's toll-free Smog Update telephone line, 1-800-CUT-SMOG, and on the AQMD's Internet Website http://www.aqmd.gov.

Newspapers, television and radio stations typically will report air quality information using the General Forecast Areas, shown in color below, which are larger groupings of the more specific Air Monitoring Areas.

The 1-800-CUT-SMOG (1-800-288-7664) line also provides smog forecast and current smog level information by ZIP code.

The AQMD's Internet Website provides both forecasts as well as smog levels for that day and the previous day. Forecasts for the next day normally are posted by noon.

General Forecast Areas & Air Monitoring Areas

Coastal

Northwest Los Angeles County Coastal	2
Southwest Los Angeles County Coastal	3
South Los Angeles County Coastal	4
North Orange County Coastal	18
Central Orange County Coastal	20

Metropolitan

Central Los Angeles County	1
Southeast Los Angeles County	5
South Central Los Angeles County	12
North Orange County	16

San Fernando Valley

West San Fernando Valley	6
East San Fernando Valley	7
Santa Clarita Valley	13

San Gabriel Valley

West San Gabriel Valley	8
East San Gabriel Valley	9
Pomona/Walnut Valley	10
South San Gabriel Valley	11

Inland Orange County

Central Orange County	17
Saddleback Valley	19
Capistrano Valley	21

Riverside Valley

Corona/Norco Area	22
Metropolitan Riverside	23

San Bernardino Valley

Northwest San Bernardino Valley	32
Southwest San Bernardino Valley	33
Central San Bernardino Valley	34
East San Bernardino Valley	35

Hemet/Elsinore Area

Perris Valley	24
Lake Elsinore	25
Hemet/San Jacinto Valley	28

Temecula/Anza Area

Temecula Valley	26
Anza Area	27

San Gabriel Mountains 15

San Bernardino Mountains

West San Bernardino Mountains	36
Central San Bernardino Mountains	37

Big Bear Lake 38

Banning Pass Area 29

Coachella/Low Desert

Coachella Valley	30
East Riverside County	31

ANTELOPE VALLEY APCD* 14

MOJAVE DESERT AQMD*

Victor Valley	39
Northern Mojave Desert	40
Central Mojave Desert	41

*These agencies contract with the South Coast AQMD for forecasting services. Also, the Antelope Valley APCD contracts with the Mojave Desert AQMD for other services. For more air quality information in these areas, please call the Mojave Desert AQMD at (760) 245 1661, extension 5067.

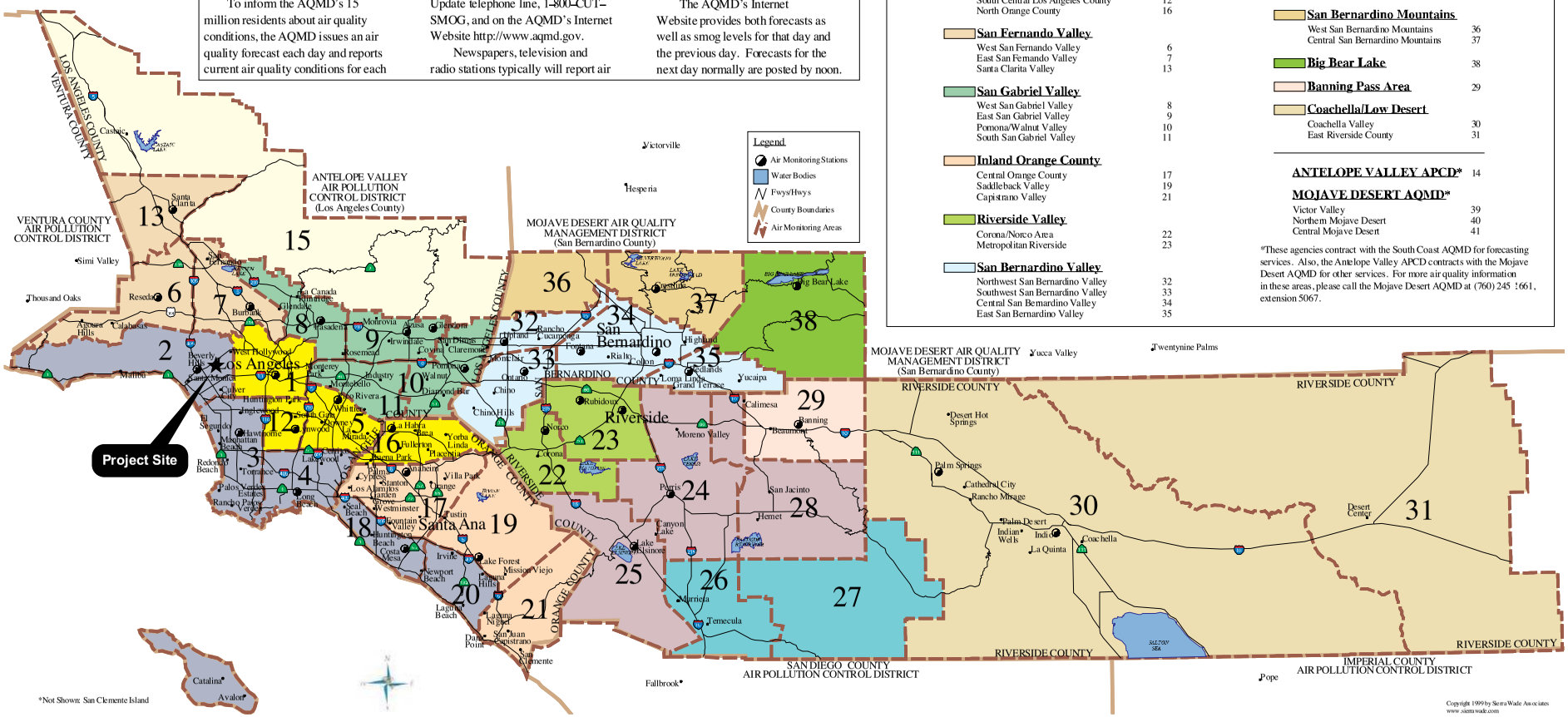

Figure IV.B-2
SCAQMD SRA Map

Source: Sierra Wade Associates, 1999.

Table IV.B-2
Summary of Ambient Air Quality in the Project Vicinity

Pollutant[a]	Year		
	2016	2017	2018
Ozone (O_3)			
Maximum 1-hour Concentration (ppm)	0.085	0.099	0.094
Days exceeding CAAQS (0.09 ppm)	0	1	0
Maximum 8-hour Concentration (ppm)	0.073	0.077	0.073
Days exceeding NAAQS (0.070 ppm)	2	1	2
Days exceeding CAAQS (0.07 ppm)	2	3	2
Respirable Particulate Matter (PM_{10})			
Maximum 24-hour Concentration (µg/m^3)	67	96	81
Days exceeding NAAQS (150 µg/m^3)	0	0	0
Days exceeding CAAQS (50 µg/m^3)	18	41	31
Annual Arithmetic Mean (µg/m3)	32	34	34
Does measured AAM exceed CAAQS (20 µg/m^3)?	**Yes**	**Yes**	**Yes**
Fine Particulate Matter ($PM_{2.5}$)			
Maximum 24-hour Concentration (µg/m^3)	44	49	44
Days exceeding NAAQS (35 µg/m^3)	2	5	3
Annual Arithmetic Mean (µg/m^3)	12	12	13
Does measured AAM exceed NAAQS (12 µg/m^3)?	No	No	Yes
Does measured AAM exceed CAAQS (12 µg/m^3)?	No	No	Yes
Carbon Monoxide (CO)			
Maximum 1-hour Concentration (ppm)	2.2	2.0	1.6
Days exceeding NAAQS (35.0 ppm)	0	0	0
Days exceeding CAAQS (20.0 ppm)	0	0	0
Maximum 8-hour Concentration (ppm)	1.1	1.2	1.3
Days exceeding NAAQS and CAAQS (9 ppm)	0	0	0
Nitrogen Dioxide (NO_2)			
Maximum 1-hour Concentration (ppm)	0.07	0.06	0.07
Days exceeding CAAQS (0.18 ppm)	0	0	0
Annual Arithmetic Mean (ppm)	0.02	0.01	0.02
Does measured AAM exceed NAAQS (0.0534 ppm)?	No	No	No
Does measured AAM exceed CAAQS (0.03 ppm)?	No	No	No
Sulfur Dioxide (SO_2)			
Maximum 1-hour Concentration (ppm)	0.013	N/A	N/A
Days exceeding CAAQS (0.25 ppm)	0	0	0
Maximum 24-hour concentration (ppm)	N/A	N/A	N/A
Days exceeding CAAQS (0.04 ppm)	0	0	0
Days exceeding NAAQS (0.14 ppm)	0	0	0
Annual Arithmetic Mean (ppm)	N/A	N/A	N/A
Does measured AAM exceed NAAQS (0.030 ppm)?	No	No	No

Table IV.B-2 (Continued)
Summary of Ambient Air Quality in the Project Vicinity

Pollutant[a]	Year		
	2016	2017	2018
Lead[b]			
Maximum 30-day Average Concentration (µg/m^3)	N/A	N/A	N/A
Does measured concentration exceed NAAQS (1.5 µg/m^3)?	No	No	No
Maximum Calendar Quarter Concentration (µg/m^3)	N/A	N/A	N/A
Does measured concentration exceed CAAQS (1.5 µg/m^3)?	No	No	No
Sulfate			
Maximum 24-hour Concentration (µg/m^3)	5.8	N/A	N/A
Does measured concentration exceed CAAQS (25 µg/m^3)?	No	No	No

µg/m^3 = micrograms per cubic meter

AAM = annual arithmetic mean

ppm = parts per million by volume

[a] *Not all pollutants are monitored at SRA2 (Northwest Coastal LA County). For pollutant concentrations that are not available for SRA2, values from SRA1 (Central LA) is presented.*

[b] *USEPA regulation requires the SCAQMD operate lead monitoring stations near sources of lead. As there are no major sources of lead emissions within the Project Source Receptor Area, lead monitoring was not performed within SRA2. However, as of 2018, no monitoring stations within the South Coast Basin demonstrated an exceedance of the lead NAAQS. Attainment redesignation for lead is currently pending with the USEPA*

Source: South Coast Air Quality Management District Ambient Monitoring Data (2016–2018), www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year, accessed September 21, 2020.

(b) Existing Health Risk in the Surrounding Area

As shown in Figure IV.B-3 on page IV.B-24, based on the MATES-IV model, the calculated cancer risk in the Project area is approximately 925.71 in one million.[25] The cancer risk in this area is predominately related to nearby sources of diesel particulate (e.g., the I-405 freeway). In general, the risk at the Project Site is comparable with other urbanized areas in Los Angeles.

The OEHHA, on behalf of the CalEPA, provides a screening tool (CalEnviroScreen) that can be used to help identify California communities that are disproportionately burdened by multiple sources of pollution. According to CalEnviroScreen, the Project Site

[25] *SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-IV), MATES IV Interactive Carcinogenicity Map, 2015.*

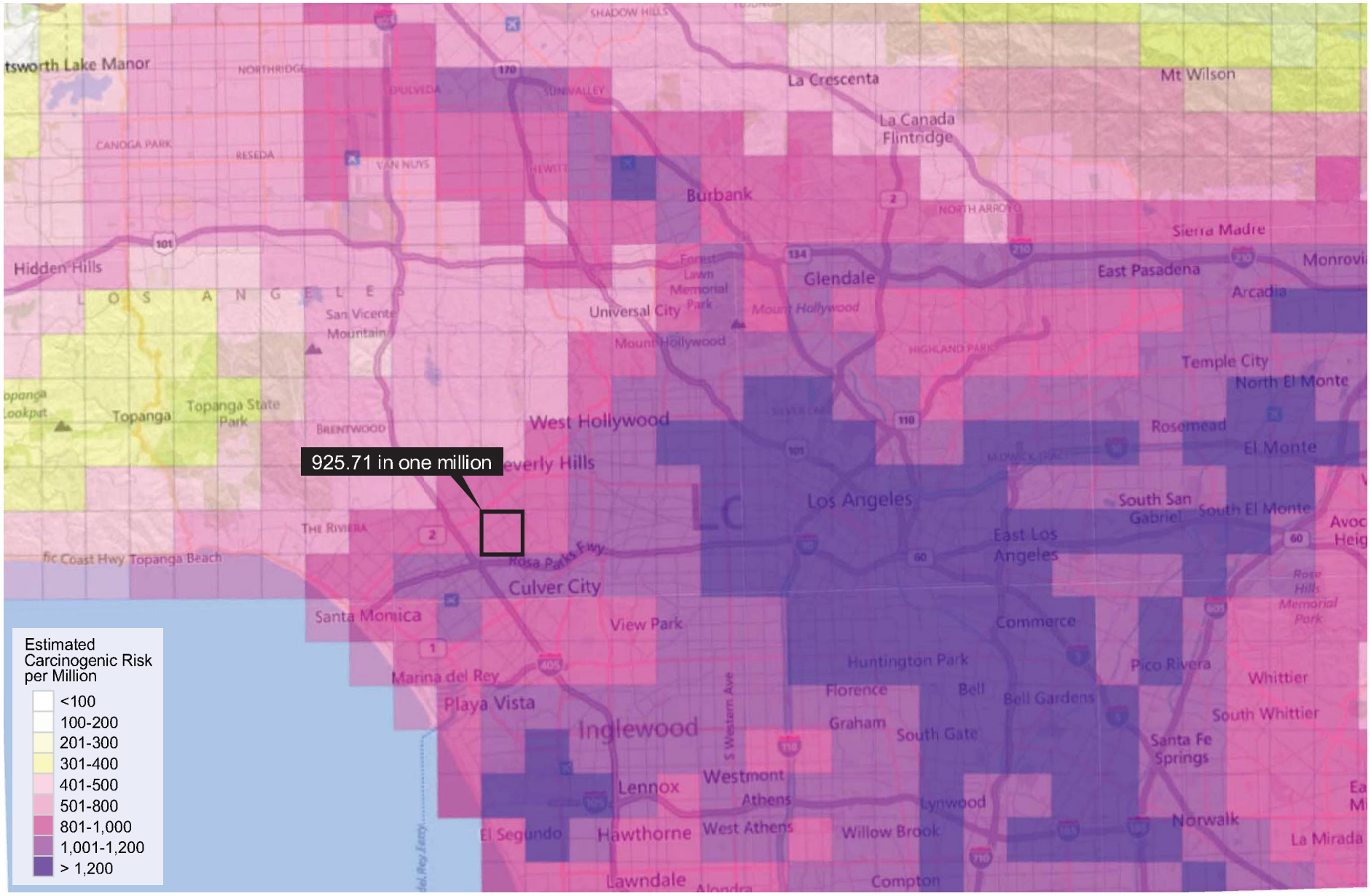

Figure IV.B-3
MATES Cancer Risk

Source: South Coast AQMD, 2016.

is located in the 20th to 25th percentile, which means that the Project Site is better than average in terms of pollution in comparison to other communities within California.[26]

The SCAQMD developed a web tool which allows one to search for public information about SCAQMD-regulated facilities that are required to have a permit to operate equipment that release pollutants into the air.[27] Potential sources of TACs within the Project Site vicinity were identified using SCAQMD's Facility Information Database (FIND) search and site reconnaissance to identify potential non-permitted air toxic emitting sources (e.g., vehicles travelling on freeways, diesel trucks idling at warehouse distribution facilities in excess of 100 trucks per day). Based on this screening analysis, one dry cleaner was found to be located approximately 25 meters (85 feet) north of the Project site. As discussed previously, dry cleaning operations typically use perchloroethylene (perc) which has been identified by the CARB as a TAC and carcinogen.

(c) Surrounding Uses

As shown in Figure IV.B-4 on page IV.B-26, the Project Site is located in an urbanized area. The Project Site is bounded by the Courtyard by Marriott hotel, the Century Park hotel, and a small commercial shopping center that includes a dry cleaner and a smog check station to the north; a beauty salon, and single-family residential uses to the west; and single-family residential uses to the east and to the south. Within the Project vicinity, major arterials such as Olympic Boulevard are generally developed with more dense residential and commercial development, while lower density mixed-use and residential areas are located along the adjacent collector streets.

(d) Sensitive Uses

Some population groups, including children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to air pollution than others. As shown in Figure IV.B-4, the closest sensitive land uses to the Project Site are residential uses directly adjacent to the Project Site. As such, these residences would experience the highest levels of Project emissions. While there are other sensitive receptors in the Project vicinity, they are farther away than the residences immediately adjacent to the Project Site, and emission levels and impacts would be less.

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[26] *OEHHA, CalEnviroScreen 3.0 MAP, https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30, accessed September 21, 2020.*

[27] *SCAQMD, Facility Information Detail (F.I.N.D.), www.aqmd.gov/nav/FIND, accessed September 21, 2020.*

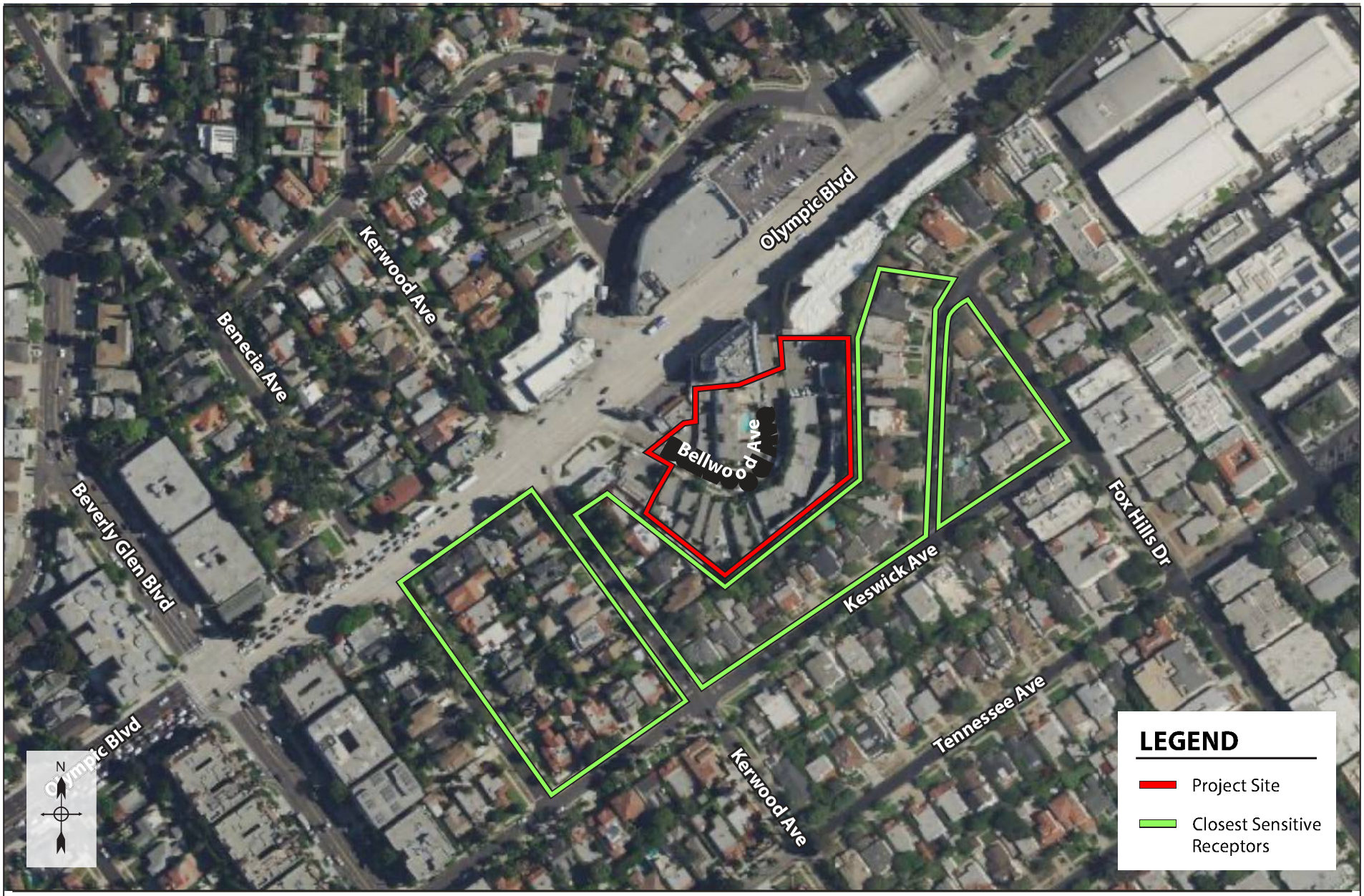

Figure IV.B-4
Sensitive Receptors

Source: Apple Maps, 2020; Eyestone Environmental, 2020.

(e) Existing Project Site Emissions

The Project Site is currently occupied by three existing multi-family residential developments totaling 43,939 square feet, including 112 residential units. These three multi-family residential developments include a two-story, 13-unit building located at 10341–10381 Bellwood Avenue; seven, two-story buildings with a total of 82 units located at 10328–10366 Bellwood Avenue; and six one-story bungalow court buildings located at 10368–10384 Bellwood Avenue with a total of 17 units. Table IV.B-3 below presents an estimate of the existing emissions within the Project Site.

Area source emissions are generated by, among other things, landscape equipment, fireplaces, and the use of consumer products. Energy source emissions are generated as a result of activities in buildings for which natural gas is used (e.g., natural gas for heat or cooking). Mobile source emissions are generated by motor vehicle trips to and from the Project Site.

Table IV.B-3
Estimated Existing Operational Emissions—Baseline[a]

Emission Source	Pollutant Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	2	2	10	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	1	4	11	<1	2	1
Total Existing Emissions[a]	3	6	21	<1	3	1

Numbers may not add up exactly due to rounding.

[a] *The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix C (CalEEMod Output) of this Draft EIR.*

Source: Eyestone Environmental, 2021.

3. Project Impacts

a. Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the Project would have a significant impact related to air quality if it would:

Threshold (a): Conflict with or obstruct implementation of the applicable air quality plan.

Threshold (b): Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

Threshold (c): Expose sensitive receptors to substantial pollutant concentrations.

Threshold (d): Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

For this analysis, the Appendix G Thresholds listed above are relied upon. The City's 2006 L.A. CEQA Thresholds Guide includes factors to assist in answering the Appendix G Threshold questions.

The L.A. CEQA Thresholds Guide identifies the following factors that may be relevant to preparing the air quality impacts analysis:

(1) Construction

(a) Combustion Emissions from Construction Equipment

- Type, number of pieces and usage for each type of construction equipment;
- Estimated fuel usage and type of fuel (diesel, natural gas) for each type of equipment; and
- Emission factors for each type of equipment.

(b) Fugitive Dust—Grading, Excavation and Hauling

- Amount of soil to be disturbed on-site or moved off-site;
- Emission factors for disturbed soil;
- Duration of grading, excavation and hauling activities;
- Type and number of pieces of equipment to be used; and
- Projected haul route.

(c) Fugitive Dust—Heavy-Duty Equipment Travel on Unpaved Road

- Length and type of road;
- Type, number of pieces, weight and usage of equipment; and
- Type of soil.

(d) Other Mobile Source Emissions

- Number and average length of construction worker trips to Project Site, per day; and
- Duration of construction activities.

(2) Operation

- Operational emissions exceed 10 tons per year of volatile organic gases or any of the daily thresholds presented below (as reprinted from the CEQA Air Quality Handbook):

Pollutant	Significance Threshold (lbs/day)
ROG	55
NO_X	55
CO	550
PM_{10}	150
SO_X	150

- Either of the following conditions would occur at an intersection or roadway within one-quarter mile of a sensitive receptor:
  - The proposed project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 parts per million (ppm), respectively; or
  - The incremental increase due to the project is equal to or greater than 1.0 ppm for the California 1-hour CO standard, or 0.45 ppm for the 8-hour CO standard.
- The project creates an objectionable odor at the nearest sensitive receptor.

(3) Toxic Air Contaminants

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The regulatory framework for the toxic material(s) and process(es) involved;
- The proximity of the TACs to sensitive receptors;
- The quantity, volume and toxicity of the contaminants expected to be emitted;

- The likelihood and potential level of exposure; and
- The degree to which project design will reduce the risk of exposure.

(4) SCAQMD's CEQA Air Quality Handbook

To assist in answering the Appendix G Threshold questions and factors identified in the City's 2006 L.A. CEQA Thresholds Guide for purposes of this analysis, the City of Los Angeles utilizes the thresholds of significance in the SCAQMD's *CEQA Air Quality Handbook, Chapter 6*, as identified below, to assess the significance of the Project's estimated air quality impacts. Specifically, Table IV.B-4 on page IV.B-31 shows SCAQMD's currently recommended significance thresholds, which provide numerical thresholds for evaluating the significance of a project's estimated air quality emissions.

(a) Construction

Based on the criteria set forth in the SCAQMD's *CEQA Air Quality Handbook*,[28] the Project would have a significant impact with regard to construction emissions if any of the following would occur:

- Regional emissions from both direct and indirect sources would exceed any of the SCAQMD prescribed threshold levels identified in Table IV.B-4.
- Maximum on-site daily localized emissions exceed the Localized Significance Thresholds (LST), resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO (20 ppm [23,000 µg/m^3] over a 1-hour period or 9.0 ppm [10,350 µg/m^3] averaged over an 8-hour period) and NO_2 (0.18 ppm [338.4 µg/m^3] over a 1-hour period, 0.1 ppm [188 µg/m^3] over a three-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm [56.4 µg/m^3] averaged over an annual period).
- Maximum on-site localized PM_{10} or $PM_{2.5}$ emissions during construction exceed the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the Project Site to exceed the incremental 24-hr threshold of 10.4 µg/m^3 or 1.0 µg/m^3 PM_{10} averaged over an annual period.

[28] *SCAQMD, CEQA Air Quality Handbook, 1993.*

Table IV.B-4
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds[a]		
Pollutant	**Construction[b]**	**Operation[c]**
NO_X	100 lbs/day	55 lbs/day
VOC[d]	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead[e]	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs), Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality Standards for Criteria Pollutants[f]		
NO_2 1-hour average Annual Arithmetic Mean	SCAQMD is in attainment; project is significant if It causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM_{10} 24-hour average Annual Average	10.4 $\mu g/m^3$ (construction)[g] & 2.5 $\mu g/m^3$ (operation) 1.0 $\mu g/m^3$	
$PM_{2.5}$ 24-hour average	10.4 $\mu g/m^3$ (construction)[g] & 2.5 $\mu g/m^3$ (operation)	
SO_2 1-hour average 24-hour average	0.25 ppm (state) & 0.075 ppm (federal—99th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 $\mu g/m^3$ (state)	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day average Rolling 3-month average	1.5 $\mu g/m^3$ (state) 0.15 $\mu g/m^3$ (federal)	

lbs/day = pounds per day

[a] *SCAQMD CEQA Handbook (SCAQMD, 1993), Pages 6-2 and 6-3.*

[b] *Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basins).*

[c] *For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.*

Table IV.B-4 (Continued)
SCAQMD Air Quality Significance Thresholds

[d]	*Please note that the SCAQMD significance threshold is in terms of VOC while CalEEMod calculates reactive organic compounds (ROG) emissions. For purposes of this analysis, VOC and ROG are used interchangeably since ROG represents approximately 99.9 percent of VOC emissions.*
[e]	While the South Coast Air Quality Management District CEQA Air Quality Handbook contains significance thresholds for lead, Project construction and operation would not include sources of lead emissions and would not exceed the significance thresholds for lead. Unleaded fuel and unleaded paints have virtually eliminated lead emissions from commercial land use projects such as the Project. As a result, lead emissions are not further evaluated in this Draft EIR.
[f]	*Ambient air quality thresholds for criteria pollutants based on South Coast AQMD Rule 1303, Table A-2 unless otherwise stated.*
[g]	*Ambient air quality threshold based on South Coast AQMD Rule 403.*
Source: South Coast Air Quality Management District, April 2019.	

(b) Operation

Based on the criteria set forth in the SCAQMD's *CEQA Air Quality Handbook*,[29] the Project would have a significant impact with regard to operational emissions if any of the following would occur:

- Regional emissions from both direct and indirect sources exceed any of the SCAQMD prescribed threshold levels identified in Table IV.B-4 on page IV.B-31.
- Maximum on-site daily localized emissions exceed the LSTs, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO (20 parts per million (ppm) over a 1-hour period or 9.0 ppm averaged over an 8-hour period) and NO_2 (0.18 ppm over a 1-hour period, 0.1 ppm over a 3-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm averaged over an annual period).[30]
- Maximum on-site localized operational PM_{10} and $PM_{2.5}$ emissions exceed the incremental 24-hr threshold of 2.5 µg/m^3 or 1.0 µg/m^3 PM_{10} averaged over an annual period.[31]
- The Project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 ppm, respectively; or

[29] *SCAQMD, CEQA Air Quality Handbook, 1993.*

[30] *SCAQMD, LST Methodology.*

[31] *SCAQMD, Final-Methodology to Calculate Particulate Matter (PM) 2.5 and $PM_{2.5}$ Significance Thresholds, October 2006.*

- The Project creates an odor nuisance pursuant to SCAQMD Rule 402 (i.e., objectionable odor at the nearest sensitive receptor).

(c) Toxic Air Contaminants

Based on the criteria set forth in the SCAQMD's *CEQA Air Quality Handbook*, the Project would have a significant TAC impact, if:[32]

- The Project emits carcinogenic or TACs that exceed the maximum incremental cancer risk as provided in Table IV.B-4 on page IV.B-31.

(d) Consistency with Applicable Air Quality Plans

Section 15125 of the State CEQA Guidelines requires an analysis of project consistency with applicable governmental plans and policies. In accordance with the SCAQMD's *CEQA Air Quality Handbook*,[33] the following criteria were used to evaluate the Project's consistency with the SCAQMD and SCAG regional plans and policies, including the AQMP:

- Criterion 1: Will the Project result in any of the following:
  - An increase in the frequency or severity of existing air quality violations;
  - Cause or contribute to new air quality violations; or
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP?
- Criterion 2: Will the Project exceed the assumptions utilized in preparing the AQMP?
  - Is the Project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;
  - Does the Project include air quality mitigation measures; or
  - To what extent is Project development consistent with the AQMP control measures?

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[32] *SCAQMD, CEQA Air Quality Handbook, 1993, Chapter 6 (Determining the Air Quality Significance of a project) and Chapter 10 (Assessing Toxic Air Pollutants).*

[33] *SCAQMD, CEQA Air Quality Handbook, 1993, Chapter 12, Assessing Consistency with Applicable Regional Plans.*

In addition, the Project's consistency with the City of Los Angeles General Plan Air Quality Element is discussed.

(e) Cumulative Impacts

The SCAQMD neither recommends quantified analyses of cumulative construction or operational emissions, nor does it provide separate methodologies or thresholds of significance to be used to assess cumulative construction or operational impacts. Instead, based on SCAQMD guidance, individual construction projects that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the Air Basin is in non-attainment.[34] As discussed in the SCAQMD's White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution (August 2003):

> *As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR…. Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.*[35]

The cumulative analysis of air quality impacts within this Draft EIR follows SCAQMD's guidance such that construction or operational Project emissions will be considered cumulatively considerable if Project-specific emissions exceed an applicable SCAQMD recommended significance threshold.

b. Methodology

The SCAQMD published the *CEQA Air Quality Handbook* in November 1993 to assist lead agencies, as well as consultants, project proponents, and other interested parties, in evaluating potential air quality impacts of projects proposed in the Air Basin. The *CEQA Air Quality Handbook* provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used extensively in the preparation of this

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[34] *Jillian Wong, SCAQMD CEQA Specialist, personal communication, August 8, 2016.*

[35] *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. Appendix D, South Coast Air Quality Management District, August 2003.*

analysis. The SCAQMD is currently in the process of replacing the *CEQA Air Quality Handbook* with the *Air Quality Analysis Guidance Handbook*.[36]

Supplemental guidance/information to assist lead agencies is provided on the SCAQMD website (www.aqmd.gov/ceqa/hdbk.html) and includes: (1) EMFAC on-road vehicle emission factors; (2) background CO concentrations; (3) localized significance thresholds; (4) mitigation measures and control efficiencies; (5) mobile source toxics analysis; (6) off-road mobile source emission factors; (7) $PM_{2.5}$ significance thresholds and calculation methodology; and (8) updated SCAQMD Air Quality Significance Thresholds. The SCAQMD also recommends using approved models to calculate emissions from land use projects, such as the California Emissions Estimator Model (CalEEMod). These recommendations were followed in the preparation of this analysis.

The SCAQMD has also adopted land use planning guidelines in the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which considers impacts to sensitive receptors from facilities that emit TAC emissions.[37] SCAQMD's siting distance recommendations are the same as those provided by CARB (e.g., a 500-foot siting distance for sensitive land uses proposed in proximity of freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities). The SCAQMD's document introduces land use-related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. SCAQMD's guidelines are voluntary initiatives recommended for consideration by local planning agencies.

This analysis focuses on the potential change in the air quality environment due to implementation of the Project. Air pollutant emissions would result from both construction and operation of the Project. Specific methodologies used to evaluate these emissions are discussed below.

(1) Construction Emissions Methodology

Construction of the Project has the potential to generate temporary pollutant emissions through the use of heavy-duty construction equipment, such as excavators and cranes, and through vehicle trips generated from workers and haul and delivery trucks traveling to and from the Project Site. In addition, fugitive dust emissions would result from demolition and various soil-handling activities such as excavation, grading and shoring.

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[36] *SCAQMD, Air Quality Analysis Handbook, www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook, accessed September 21, 2020.*

[37] *SCAQMD, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, May 6, 2005.*

Mobile source emissions, primarily NO_X, would result from the use of construction equipment. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

(a) Regional Emissions

The Project's "regional" emissions refer to emissions that will be evaluated based on regional significance thresholds established by the SCAQMD, as discussed above. Daily regional emissions during construction are estimated by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying mobile source and fugitive dust emissions factors. The emissions are estimated using CalEEMod (Version 2016.3.2) software, an emissions inventory software program recommended by SCAQMD. The CalEEMod model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with SCAQMD and received input from other California air districts, and is currently used by numerous lead agencies in the Los Angeles area and within the state for quantifying the emissions associated with development projects undergoing environmental review, including by the City of Los Angeles.

CalEEMod is based on outputs from Off-road Emissions Inventory Program model[38] (OFFROAD) and EMission FACtor model[39] (EMFAC), which are emissions estimation models developed by CARB, and used to calculate emissions from construction activities, including off- and on-road vehicles, respectively. CalEEMod also relies upon known emissions data associated with certain activities or equipment (often referred to as "default" data, values or factors) that can be used if site-specific information is not available. CalEEMod contains default values to use in each specific local air district region. Default values within CalEEMod were obtained from a survey of construction sites conducted by the SCAQMD. The construction survey data was used to determine appropriate construction equipment based on lot size and project type.[40] Appropriate statewide default values can be used, if regional default values are not defined.

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[38] *California Air Resources Board, 2017 Off-Road Diesel Emission Factors, ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-documentation-road, accessed September 21, 2020.*

[39] *California Air Resources Board, EMFAC 2014, ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac, accessed September 21, 2020*

[40] *CAPCOA, California Emissions Estimator Model, Appendix E1: Construction Survey and SCAQMD, October 2017.*

The input values used in this analysis were adjusted to be Project-specific based on equipment types and the construction schedule. These values were then applied to the construction phasing assumptions used in the criteria pollutant analysis to generate criteria pollutant emissions values for each construction activity. Construction tasks were aggregated to reflect overlapping tasks and identify the reasonably expected maximum construction emissions occurring over the course of Project construction. To be conservative, this analysis evaluates the Project's air quality impacts during construction based on reasonably expected maximum construction emissions even though such emissions would not occur throughout the entire construction phase. Detailed equipment lists, construction scheduling, and emissions calculations are provided in Appendix C of this Draft EIR.

(b) Localized Emissions

The localized effects from the on-site portion of daily construction emissions were evaluated at sensitive receptor locations closest to the Project Site potentially impacted by the Project according to the SCAQMD's LST methodology, which uses on-site mass emissions rate look-up tables and Project-specific modeling, where appropriate, to assess whether the Project's local emissions would exceed the SCAQMD's significance thresholds, as described above.[41] SCAQMD provides LSTs applicable to the following criteria pollutants: NO_X; CO; PM_{10}; and $PM_{2.5}$.[42] SCAQMD does not provide an LST for SO_2 since land use development projects typically result in negligible construction and long-term operation emissions of this pollutant as on-site activities during construction and operation do not include activities that emit high levels of SO_2. Since VOCs are not a criteria pollutant, there is no ambient standard or SCAQMD LST for VOCs. Due to the role VOCs play in O_3 formation, it is classified as a precursor pollutant, and only a regional emissions threshold has been established.

LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. The SCAQMD developed mass rate look-up tables for each source receptor area and to determine whether or not a project may generate significant adverse localized air quality impacts. SCAQMD provides LST mass rate look-up tables for projects with active construction areas that are less than or equal to 5 acres. If the project exceeds the LST look-up values, then the SCAQMD recommends that project-specific air quality modeling

[41] *SCAQMD, LST Methodology Appendix C-Mass Rate LST Look-Up Table, October 2009.*

[42] *SCAQMD, LST Methodology, p. 1-4.*

must be performed to determine if the Project's local emissions exceed applicable significance thresholds.

(2) Operation Emissions Methodology

(a) Regional Emissions

Analysis of the Project's impact on regional air quality during long-term Project operations (i.e., after construction is complete) takes into consideration four types of sources: (1) area; (2) energy; (3) mobile; and (4) stationary. Area source emissions are generated by, among other things, landscape equipment, fireplaces, and the use of consumer products. Energy source emissions are generated as a result of activities in buildings for which natural gas is used (e.g., natural gas for heat or cooking). Mobile source emissions are generated by the increase in motor vehicle trips to and from the Project Site associated with operation of the Project. Stationary source emissions are generated from proposed emergency generators during routine maintenance/testing.

Similar to construction, SCAQMD's CalEEMod model was used to estimate Project emissions during operation.

Mobile-source emissions were calculated within CalEEMod. However, the Project-related VMT was calculated using the Los Angeles Department of Transportation (LADOT) VMT Calculator rather than applying the CalEEMod default VMT. The VMT Calculator was developed by the City and LADOT to comply with SB 743, which requires lead agencies to adopt VMT criteria to determine transportation related impacts.[43] CalEEMod calculates mobile source emissions using the Project's VMT, trip generation, and emission factors based on EMFAC.[44]

Energy source emissions are based on natural gas (building heating and water heaters). Area source emissions include landscaping equipment and consumer product usage (including paints) rates provided in CalEEMod. Natural gas usage factors in CalEEMod are based on the California Energy Commission California Commercial End Use Survey data set, which provides energy demand by building type and climate zone. Emissions associated with use of emergency generators were calculated using CalEEMod, in which emission factors are based on Table 3.4-1 (Gaseous Emission Factors for Large Stationary Diesel Engines) from EPA's AP-42: Compilation of Air Pollutant Emission

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[43] *Gibson Transportation Consulting, Transportation Assessment for Senior Residential Community at the Bellwood Project, February 2021, revised April 2021.*

[44] *CAPCOA, California Emissions Estimator Model, Appendix A: Calculation Details for CalEEMod, October 2017.*

Factors. The emissions are based on the horsepower rating of the diesel generator and the number of hours operated per year for testing purposes.

To determine if a significant air quality impact would occur, the net increase in regional operational emissions generated by the Project was compared against the SCAQMD's significance thresholds.[45] To be conservative, this analysis evaluates the Project's air quality impacts during operations based on reasonably expected maximum operational emissions even though such emissions would not occur throughout the entire operational phase. Refer to Appendix C of this Draft EIR for additional information regarding methodology.

(b) Localized Emissions

(i) On-Site Emissions

Localized impacts from Project operations include calculation of on-site emissions (e.g., combustion from natural gas usage) using SCAQMD's recommended CalEEMod and evaluation of these emissions consistent with the SCAQMD's LST methodology discussed above.

(ii) Off-Site Emissions

Potential localized CO concentrations from induced traffic at nearby intersections are addressed consistent with the methodologies and assumptions used in the consistency analysis provided in the 2003 AQMP.

It has long been recognized that CO exceedances are caused by vehicular emissions,[46] primarily when idling at intersections.[47,48] Accordingly, vehicle emissions standards have become increasingly more stringent. Before the first vehicle emission regulations, cars in the 1950s were typically emitting about 87 grams of CO per mile.[49] Currently, the CO standard in California is a maximum of 3.4 grams/mile for passenger

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[45] *SCAQMD, SCAQMD Air Quality Significance Thresholds, revised March 2015. SCAQMD based these thresholds, in part, on the federal Clean Air Act and, to enable defining "significant" for CEQA purposes, defined the setting as the South Coast Air Basin. See SCAQMD, CEQA Air Quality Handbook, April 1993, pp. 6-1–6-2.*

[46] *USEPA. 2000. Air Quality Criteria for Carbon Monoxide. EPA 600/P-099/001F.*

[47] *SCAQMD. 1993. CEQA Air Quality Handbook. Section 4.5.*

[48] *SCAQMD. 2003. Air Quality Management Plan.*

[49] *USEPA, Timeline of Major Accomplishments in Transportation, Air Pollution, and Climate Change, www.epa.gov/air-pollution-transportation/timeline-major-accomplishments-transportation-air-pollution-and-climate, accessed September 21, 2020.*

cars (with provisions for certain cars to emit even less).[50] With the turnover of older vehicles, introduction of cleaner fuels and implementation of control technology on industrial facilities, CO concentrations in the Air Basin have steadily declined.

The analysis prepared for CO attainment in the Air Basin by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the Air Basin. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan).[51] As discussed in the 1992 CO Plan, peak carbon monoxide concentrations in the Air Basin are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of the 1992 CO Plan and subsequent plan updates and air quality management plans.

In the 1992 CO Plan, a CO hot spot analysis was conducted for the four worst-case scenario intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach Boulevard and Imperial Highway (Lynwood); Wilshire Boulevard and Veteran Avenue (Westwood); Sunset Boulevard and Highland Avenue (Hollywood); and La Cienega Boulevard and Century Boulevard (Inglewood). These analyses did not predict a violation of CO standards. The peak modeled CO concentrations due to vehicle emissions occurred at the intersection of Wilshire Boulevard and Veteran Avenue, which had a daily traffic volume of approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm, which indicates that the most stringent 1-hour CO standard (20.0 ppm) would likely not be exceeded until the daily traffic at the intersection exceeded more than 400,000 vehicles per day.[52] The AQMP CO hotspots modeling also took into account worst-case meteorological conditions and background CO concentrations. The Los Angeles County Metropolitan Transportation Authority (Metro) evaluated the level of service (LOS) in the vicinity of the Wilshire Boulevard and Veteran Avenue intersection and found it to be Level E at peak morning traffic and Level F at peak afternoon traffic.[53,54] As an initial screening step, if a project intersection does not exceed 400,000 vehicles per day, then the project

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[50] *CARB, California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-duty Trucks, and Medium-duty Vehicles, amended September 27, 2010.*

[51] *SCAQMD, 1992. Federal Attainment Plan for Carbon Monoxide.*

[52] *Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).*

[53] *The Metropolitan Transportation Authority measured traffic volumes and calculated the LOS for the intersection of Wilshire Blvd./ Sepulveda Ave. which is a block west along Wilshire Blvd., still east of Interstate 405.*

[54] *Metropolitan Transportation Authority. 2004. Congestion Management Program for Los Angeles County. Exhibit 2-6 and Appendix A.*

does not need to prepare a detailed CO hot spot. If a project would potentially result in a CO hotspot based on the initial screening, detailed modeling may be performed using California LINE Source Dispersion Model, version 4 (CALINE4), which is a model used to assess air quality impacts near transportation facilities (i.e., roadways, intersections, street canyons, and parking facilities).

(3) Toxic Air Contaminants Impacts (Construction and Operations)

Potential TAC impacts are evaluated by conducting a qualitative analysis consistent with SCAQMD guidance and the CARB Handbook. The qualitative analysis consists of reviewing the Project to identify any new or modified TAC emissions sources and evaluating the potential for such sources to cause significant TAC impacts. If the qualitative evaluation determines the potential for significant impacts from a new TAC source, or modification of an existing TAC emissions source, a more detailed dispersion analysis is conducted to evaluate estimated Project TAC emissions against the applicable SCAQMD significance thresholds based on downwind sensitive receptor locations.

c. Project Design Features

The Project would incorporate the following project design feature to reduce pollutant emissions during construction activities:

Project Design Feature AQ-PDF-1: Where power poles are available, electricity from power poles and/or solar-powered generators rather than temporary diesel or gasoline generators will be used during construction.

The Project would also incorporate project design features to support and promote environmental sustainability as discussed under Section IV.D, Greenhouse Gas Emissions, of this Draft EIR. While these features are designed primarily to reduce greenhouse gas emissions, they would also serve to reduce criteria air pollutants discussed herein.

d. Analysis of Project Impacts

Threshold (a): Conflict with or obstruct implementation of the applicable air quality plan.

(1) Impact Analysis

(a) SCAQMD CEQA Air Quality Handbook Policy Analysis

To assess whether the Project would conflict with or obstruct implementation of an applicable air quality plan, this analysis evaluates the Project's consistency with

SCAQMD's AQMP and SCAG's RTP/SCS. In accordance with the SCAQMD's *CEQA Air Quality Handbook*, Chapter 12, the following criteria are considered as part of this evaluation:

- Criterion 1: Would the project result in any of the following:
  - An increase in the frequency or severity of existing air quality violations; or
  - Cause or contribute to new air quality violations; or
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- Criterion 2: Would the project exceed the assumptions utilized in preparing the AQMP?
  - Is the Project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;
  - Does the Project include air quality mitigation measures; or
  - To what extent is Project development consistent with the AQMP control measures?

(i) Criterion 1

The Project is an infill development near transit within an existing urbanized area that would concentrate new residential uses within a SCAG-designated HQTA.[55] Public transit service within the study area is currently provided by Metro, Culver City Bus, Santa Monica Big Blue Bus, Antelope Valley Transit Authority, Santa Clarita Transit, and LADOT Commuter Express. Bus stops that serve the Project Site (within a 0.25-mile walking distance) are currently provided along Olympic Boulevard at Beverly Glen Boulevard, Kerwood Avenue, and Century Park West. In addition, the Project Site is located approximately 0.5 mile from the future Metro Purple Line rail station. This means the Project advances regional goals to reduce VMT through infill development near transit that has the co-benefit of reducing air emissions and GHG emissions compared to the average

[55] *SCAG, High Quality Transit Areas (HQTA) 2016—SCAG Region, http://gisdata-scag.opendata.arcgis.com/datasets/1f6204210fa9420b87bb2e6c147e85c3_0?geometry=-118.958%2C33.943%2C-117.817%2C34.142, accessed May 12, 2021.*

regional project. As shown below, the Project would not exceed any SCAQMD significance thresholds for air quality emissions.[56]

With respect to the first criterion, as discussed below, localized concentrations of NO_2 as NO_X, CO, PM_{10}, and $PM_{2.5}$ have been analyzed for the Project. Due to California Low Sulfur Diesel Fuel requirements, calculations shown below demonstrate that SO_2 emissions would be negligible during construction and long-term operations, and, therefore, would not have the potential to cause or affect a violation of the SO_2 ambient air quality standard.[57] Since VOCs are not a criteria pollutant, there is no ambient standard or localized threshold for VOCs. Due to the role VOCs play in O_3 formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established.

Particulate matter is the primary pollutant of concern during construction activities, and therefore, the Project's PM_{10} and $PM_{2.5}$ emissions during construction were analyzed in order to: (1) ascertain potential effects on localized concentrations; and (2) determine if there is a potential for such emissions to cause or affect a violation of the ambient air quality standards for PM_{10} and $PM_{2.5}$. As shown in Table IV.B-7 on page IV.B-58 in the analysis below, the increases in PM_{10} and $PM_{2.5}$ emissions during construction would not exceed the SCAQMD-recommended significance thresholds at sensitive receptors in proximity to the Project Site.

Additionally, the Project's maximum potential NO_X and CO daily emissions during construction were analyzed to ascertain potential effects on localized concentrations and to determine if there is a potential for such emissions to cause or affect a violation of an applicable ambient air quality standard. As shown in Table IV.B-7 in the analysis below, NO_X and CO would not exceed the SCAQMD-recommended localized significance thresholds. **Therefore, Project construction would not result in a significant impact with regard to localized air quality.**

Because the Project would not introduce any substantial stationary sources of emissions, CO is the preferred benchmark pollutant for assessing local area air quality impacts from post-construction motor vehicle operations.[58] As discussed below on page IV.B-59, no intersections would require a CO hotspot analysis, and impacts would be

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[56] *Air quality violations under Criterion 1 are evaluated based on ambient air quality standards (NAAQS and CAAQS). Determining whether the Project would exceed ambient air quality standards is based on localized emissions.*

[57] *California Air Resources Board, California Low Sulfur Diesel Fuel Fact Sheet, ww2.arb.ca.gov/resources/fact-sheets/california-low-sulfur-diesel-fuel-fact-sheet, accessed September 21, 2020.*

[58] *SCAQMD, CEQA Air Quality Handbook, 1993, Chapter 12, Assessing Consistency with Applicable Regional Plans.*

less than significant. **Therefore, the Project would not increase the frequency or severity of an existing CO violation or cause or contribute to new CO violations.**

An analysis of potential localized operational impacts from on-site activities was also conducted. As shown in Table IV.B-8 on page IV.B-59 in the analysis below, localized NO_2 as NO_X, CO, PM_{10}, and $PM_{2.5}$ operational impacts would be less than significant. **Therefore, the Project would also not delay timely attainment of air quality standards or interim emission reductions specified in the AQMP.**

(ii) Criterion 2

With respect to the second criterion for determining consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2016 RTP/SCS regarding population, housing, and growth trends. Determining whether or not a project exceeds the assumptions reflected in the AQMP involves the evaluation of three criteria: (1) consistency with applicable population, housing, and employment growth projections; (2) Project mitigation measures; and (3) appropriate incorporation of AQMP land use planning strategies. The following discussion provides an analysis with respect to each of these three criteria.

- Is the project consistent with the population, housing, and employment growth projections upon which AQMP forecasted emission levels are based?

A project is consistent with the AQMP, in part, if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. In the case of the 2016 AQMP, two sources of data form the basis for the projections of air pollutant emissions: the City of Los Angeles General Plan and SCAG's RTP/SCS.[59] As noted above, the 2020–2045 RTP/SCS is now available. Therefore, a comparison of population growth projections from SCAG's 2020–2045 RTP/SCS is also provided below.

As described in Section IV.E, Land Use and Planning, of this Draft EIR, the City's General Plan serves as a comprehensive, long-term plan for future development of the City. Refer to Subsection (D)(1)(b), City of Los Angeles Policies, below, for a discussion of the Project's consistency with applicable goals, objectives and policies of the City's General Plan Air Quality Element. The 2016–2040 and 2020–2045 RTP/SCS provide socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are

[59] *As noted above, SCAG recently adopted the 2020–2045 RTP/SCS. However, the 2016 AQMP is based on the 2016-2040 RTP/SCS. Therefore, a comparison of population growth projections from SCAG's 2016-2040 and 2020–2045 RTP/SCS are provided below.*

based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review.

According to SCAG's 2016 RTP/SCS, the forecasted population for the City of Los Angeles Subregion in 2019 was approximately 4,036,475 persons.[60] In 2023, the projected occupancy year of the Project, the City of Los Angeles Subregion is anticipated to have a population of approximately 4,145,604 persons.[61] The 2016–2040 RTP/SCS's employment forecast for the City of Los Angeles Subregion in 2019 was approximately 1,814,575 employees.[62] In 2023, the City of Los Angeles Subregion is anticipated to have approximately 1,882,104 employees.[63] The 2016–2040 RTP/SCS's household forecast within the City of Los Angeles Subregion in 2019 was 1,416,700.[64] In 2023, the number of households within the City of Los Angeles Subregion is anticipated to be 1,468,814.[65]

According to SCAG's 2020–2045 RTP/SCS, the forecasted population for the City of Los Angeles Subregion in 2019 was approximately 4,020,438 persons.[66] In 2023, the City of Los Angeles Subregion is anticipated to have a population of approximately 4,135,955 persons.[67] The 2020–2045 RTP/SCS's employment forecast for the City of Los Angeles Subregion in 2019 was approximately 1,878,052 employees. [68] In 2023, the City of Los Angeles Subregion is anticipated to have approximately 1,917,721 employees.[69] The 2020-2045 RTP/SCS's household forecast within the City of Los Angeles Subregion in 2019 was 1,411,069.[70] In 2023, the number of households within the City of Los Angeles Subregion is anticipated to be 1,469,828.[71]

The Project proposes 192 senior housing residential units, consisting of 46 studio memory care guest rooms, 51 one-bedroom assisted living guest rooms, 24 two-bedroom assisted living guest rooms, 43 one-bedroom independent living dwelling units, and 28 two-

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60 *Based on a linear interpolation of 2012–2040 data.*

61 *Based on a linear interpolation of 2012–2040 data.*

62 *Based on a linear interpolation of 2012–2040 data.*

63 *Based on a linear interpolation of 2012–2040 data.*

64 *Based on a linear interpolation of 2012–2040 data.*

65 *Based on a linear interpolation of 2012–2040 data.*

66 *Based on a linear interpolation of 2016–2045 data.*

67 *Based on a linear interpolation of 2016–2045 data.*

68 *Based on a linear interpolation of 2016–2045 data.*

69 *Based on a linear interpolation of 2016–2045 data.*

70 *Based on a linear interpolation of 2016–2045 data.*

71 *Based on a linear interpolation of 2016–2045 data.*

bedroom independent living dwelling units in an eldercare facility for persons age 62 and older. Based on the generation rates used in the City of Los Angeles VMT Calculator, the Project would generate approximately 231 residents and 88 employees.[72] Per the 2016–2040 RTP/SCS, the estimated 231 new residents generated by the Project would represent approximately 0.21 percent of the population growth forecasted by SCAG in the City of Los Angeles Subregion between 2019 and 2023, and the Project's estimated 88 employees would constitute approximately 0.13 percent of the employment growth forecasted between 2019 and 2023. The Project's 192 units would represent approximately 0.37 percent of the household growth forecasted by SCAG between 2019 and 2023.

Per the 2020–2045 RTP/SCS, the estimated 231 new residents generated by the Project would represent approximately 0.20 percent of the population growth forecasted by SCAG in the City of Los Angeles Subregion between 2019 and 2023,[73] and the estimated 88 employees would constitute approximately 0.22 percent of the employment growth forecasted between 2019 and 2023. The Project's 192 units would constitute 0.33 percent of the household growth within the City of Los Angeles Subregion between 2019 and 2023.

Accordingly, the Project's generation of residents and employees would be consistent with the population, housing and employment projections contained in the 2016–2040 and 2020–2045 RTP/SCS. **Because similar projections form the basis of the 2016 AQMP, the Project would be consistent with the projections in the AQMP.** Refer to Section IV.E, Land Use and Planning, of this Draft EIR, for additional discussion regarding the Project's consistency with the 2016–2040 and 2020–2045 RTP/SCS.

- Does the project implement feasible air quality mitigation measures?

As discussed below under Thresholds (b), (c) and (d), the Project would not result in any significant air quality impacts and therefore would not require mitigation. In addition, the Project would comply with all applicable regulatory standards (e.g., SCAQMD Rule 403

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[72] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H, of this Draft EIR. The VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would represent approximately 0.22 percent of SCAG's projected population growth for the City of Los Angeles Subregion between 2019 and 2023 as compared to approximately 0.21 percent. As such, it would be well within SCAG's projections for the City of Los Angeles Subregion, and the conclusions of the analysis would remain the same.*

[73] *As noted above the VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would represent approximately 0.21 percent of SCAG's projected population growth for the City of Los Angeles Subregion between 2019 and 2023 as compared to approximately 0.20 percent. As such, it would be well within SCAG's projections for the City of Los Angeles Subregion, and the conclusions of the analysis would remain the same.*

and Rule 1133, etc.) as required by SCAQMD, as summarized above. The Project also would incorporate project design features to support and promote environmental sustainability as discussed in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR. Such project design features include GHG-PDF-1 which would incorporate increased energy efficiency features such as use of LED lighting, Energy Star appliances and fenestration designed for solar orientation. While these features are designed primarily to reduce GHG emissions, they would also serve to reduce the criteria air pollutants discussed herein. Furthermore, with compliance with the regulatory requirements identified above and in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, no significant air quality impacts would occur. **As such, the Project is consistent with this AQMP consistency criterion.**

- To what extent is project development consistent with the control measures set forth in the AQMP?

As an infill development located in a HQTA, the Project advances goals of the AQMP and RTP/SCS to reduce VMT and related vehicle emissions. Pursuant to California Health and Safety Code Section 40460, SCAG also has the responsibility of preparing and approving the portions of the AQMP relating to the integration of regional land use programs, measures, and strategies. SCAQMD combines its portion of the Plan with those prepared by SCAG. The RTP/SCS and TCMs, included as Appendix IV-C of the 2016 AQMP/SIP for the Basin, are based on SCAG's 2016–2040 RTP/SCS.

With regard to land use developments, such as the Project, SCAG's 2016–2040 and 2020–2045 RTP/SCSs land use control measures (i.e., goals and policies) focus on the reduction of vehicle trips and vehicle miles traveled (VMT). As discussed in detail in Section IV.D, Greenhouse Gas Emissions, of the Draft EIR, the 2016–2040 RTP/SCS includes, for the SCAG region as a whole, a daily 22.8 Total VMT per capita for the 2012 Base Year, and a daily 20.5 Total VMT per capita for the 2040 Plan Year. For Los Angeles County, the 2012 Base Year projected daily Total VMT per capita is 21.5 and 18.4 daily Total VMT per capita for the 2040 Plan Year (with implementation of the RTP/SCS). To analyze the Project's consistency with this aspect of the 2016–2040 RTP/SCS, the Project's Total Daily VMT was obtained from the LADOT VMT Calculator.[74] As shown in Table IV.D-7 of Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, the Project

[74] *The VMT percentages in Table IV.D-7 and this section are not numeric thresholds but are used as a basis to compare a project's overall consistency with state plans and policies.*

VMT per capita of 9.9 VMT per day would be well below the Los Angeles County goals provided in the 2016–2040 RTP/SCS.[75]

The Project represents an infill development within an existing urbanized area that would concentrate new residential uses within an HQTA.[76] Therefore, the Project would be consistent with SCAG's 2016–2040 RTP/SCS, as it is located within an HQTA. Public transit service within the study area is currently provided by Metro, Culver City Bus, Santa Monica Big Blue Bus, Antelope Valley Transit Authority, Santa Clarita Transit, and LADOT Commuter Express. Bus stops that serve the Project Site (within a 0.25-mile walking distance) are currently provided along Olympic Boulevard at Beverly Glen Boulevard, Kerwood Avenue, and Century Park West. In addition, the second section of Metro's Purple Line Extension Transit Project is currently under construction in the vicinity of the Project Site. The second section of Metro's Purple Line Extension would include a subway station at Constellation Boulevard and Avenue of the Stars, approximately 0.5 mile northeast of the Project Site.[77] The Project would also provide required short- and long-term bicycle parking spaces in compliance with the requirements of the Los Angeles Municipal Code (LAMC). The increase in transit accessibility and the bicycle parking spaces provided on-site would further reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. The Project design would also provide pedestrian access that minimizes barriers and links the Project Site with external streets to encourage people to walk instead of drive. Pedestrian access would be maintained on both sides of Bellwood Avenue. Lighting and new street trees would be provided to enhance the pedestrian experience.

As discussed under Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, the Project design includes characteristics that would further reduce trips and VMT as compared to a standard project within the Air Basin as calculated within the LADOT VMT Calculator. Implementation of these sustainability features discussed above would contribute to a reduction in air quality emissions via a reduction in VMT. While these Project characteristics primarily reduce greenhouse gas emissions, they would also reduce criteria air pollutants discussed herein. In addition, the Project would result in a net

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[75] *The VMT percentages in Table IV.D-7 and this section are not numeric thresholds but are used as a basis to compare a project's overall consistency with state plans and policies. As noted above, the VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita. If full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which combined with the Project's employees would represent a total VMT per capita of 9.6 VMT per day as compared to 9.9 VMT per day, and would be further below the Los Angeles County goals provided in the RTP/SCS.*

[76] *Defined by the 2016 RTP/SCS as generally walkable transit villages or corridors that are within 0.5-mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours.*

[77] *Metro Purple Line Extension, www.metro.net/projects/westside, accessed May 12, 2021.*

decrease in vehicle trips and associated emissions when accounting for existing uses. These relative reductions in VMT from a standard project within the Air Basin help quantify the criteria air pollutant emissions reductions achieved by locating the Project within an infill, HQTA that promotes alternative modes of transportation. The Project results in a VMT reduction of approximately 24 percent (see Appendix H of this Draft EIR) compared to a Project without Reduction Features. As discussed above, the total Project daily per capita VMT is 9.9 miles, which represents a reduction of 46 percent in daily per capita VMT when compared to the SCAG 2016–2040 RTP/SCS 2040 Plan Year. This reduction in VMT is substantially better than the goals of the 2016–2040 RTP/SCS (i.e., 18-percent decrease in per capita GHG emissions from passenger vehicles by 2035 and 21-percent decrease in per capita GHG emissions from passenger vehicles by 2040).[78] The Project daily per capita VMT represent a reduction of 48 percent in daily per capita VMT when compared to the SCAG region target of 20.7 and Los Angeles County target of 19.2 daily per capita VMT in the 2020–2045 RTP/SCS.[79]

Accordingly, as the Project would support AQMP and RTP/SCS objectives of reducing VMT and the related vehicular air emissions.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of the Project on air quality in the Air Basin. The Project is an infill development near transit within an existing urbanized area that would concentrate new residential uses within an HQTA, thus reducing VMT. The Project would not have a significant long-term adverse impact on the region's ability to meet state and federal air quality standards. **As discussed above, the Project's would be consistent with the goals and policies of the AQMP and, therefore, would not conflict with or obstruct implementation of the SCAQMD's AQMP.**

(b) City of Los Angeles Policies

To achieve the goals of the Air Quality Element, performance-based standards have been adopted to provide flexibility in implementation of its policies and objectives. The following Air Quality Element goals, objectives, and policies are relevant to the Project:

Goal 2—Less reliance on single-occupant vehicles with fewer commute and non-work trips.

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[78] *The 2020–2045 RTP/SCS reflects CARB's updated SB 375 targets for the SCAG region, requiring a 19-percent decrease in VMT by 2035.*

[79] *The 2020–2045 RTP/SCS provides a 2045 Plan Year daily Total VMT per capita of 20.7 and 19.2 for the SCAG region and Los Angeles County, respectively*

Objective 2.1—It is the objective of the City of Los Angeles to reduce work trips as a step towards attaining trip reduction objectives necessary to achieve regional air quality goals.

Policy 2.1.1—Utilize compressed work weeks and flextime, telecommuting, carpooling, vanpooling, public transit, and improve walking/bicycling related facilities in order to reduce Vehicle Trips and/or Vehicle Miles Traveled (VMT) as an employer and encourage the private sector to do the same to reduce work trips and traffic congestion.

Goal 4—Minimize impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.

Objective 4.1—It is the objective of the City of Los Angeles to include regional attainment of ambient air quality standards as a primary consideration in land use planning.

Policy 4.1.1—Coordinate with all appropriate regional agencies in the implementation of strategies for the integration of land use, transportation, and air quality policies.

Objective 4.2—It is the objective of the City of Los Angeles to reduce vehicle trips and vehicle miles traveled associated with land use patterns.

Policy 4.2.2—Improve accessibility for the City's residents to places of employment, shopping centers, and other establishments.

Policy 4.2.3—Ensure that new development is compatible with pedestrians, bicycles, transit, and alternative fuel vehicles.

Policy 4.2.4—Require that air quality impacts be a consideration in the review and approval of all discretionary projects.

Policy 4.2.5—Emphasize trip reduction, alternative transit and congestion management measures for discretionary projects.

As an infill development located in a HQTA, the Project advances regional and City goals to reduce VMT and related vehicle emissions, which has the co-benefit of decreasing GHG emissions and air pollutants from mobile sources. In addition, the Project includes short- and long-term bicycle parking spaces for the proposed residential uses as required by the LAMC and is serviced by local bus lines. The Project would provide opportunities for the use of alternative modes of transportation, including access to public transit, and

opportunities for walking and biking, thereby facilitating a reduction in VMT. The Project is consistent with the existing land use pattern in the vicinity that concentrates urban density along major arterials and near transit options. The Project also includes primary entrances for pedestrians and bicyclists that would be safe, easily accessible, and a short distance from transit stops. Refer to Section IV.E, Land Use and Planning, of this Draft EIR, for an analysis of the Project's consistency with the City's General Plan. **Based on the discussion above, the Project is consistent with applicable policies of the City of Los Angeles Air Quality Element.**

In conclusion, analysis of Threshold (a) was based on the Project's consistency with the AQMP as well as the City of Los Angeles policies. With regard to AQMP consistency, which is primarily concerned with the long-term influence of the Project on air quality in the Air Basin, the Project would not increase the frequency or severity of an existing violation or cause or contribute to new violations for these pollutants. As the Project would not exceed any of the state and federal standards, the Project would also not delay timely attainment of air quality standards or interim emission reductions specified in the AQMP. In addition, because the Project includes similar growth projections that form the basis of the 2016 AQMP, it can be concluded that the Project would be consistent with the projections in the AQMP. Furthermore, while the Project does not require any air quality mitigation measures, the Project would comply with all applicable regulatory standards and would incorporate AQ-PDF -1 discussed above and the Project Design Features in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, that would serve to reduce the criteria air pollutants discussed herein. The Project would support the City's and SCAQMD's objectives of reducing VMT and the related vehicular air emissions as an infill development near transit within an existing urbanized area and HQTA, consistent with AQMP control measures**. Thus, the Project would not conflict with or obstruct implementation of the AQMP. With regard to the City policies, as discussed above, the Project would serve to implement applicable policies pertaining to air quality. Based on the above, impacts to Threshold (a) would be less than significant.**

(2) Mitigation Measures

Project-level impacts related to Threshold (a), implementation of the applicable air quality plan, would be less than significant during construction and operation of the Project. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to Threshold (a) during both construction and operation of the Project were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (b): Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

(1) Impact Analysis

(a) Regional Emissions

(i) Construction

Project construction is assumed to begin in 2021, occur over approximately 34 months, and complete in 2023, subject to market conditions or demand. For purposes of conservatively analyzing construction impacts, it was assumed that the Project would be begin as early as 2021. The construction equipment and truck fleet mix is anticipated to emit less pollution in future years due to more stringent emissions control regulations. As construction activities for the Project are evaluated based on an earlier start date, the emissions presented are more conservative.

As described in Section II, Project Description, of this Draft EIR, construction of the Project would commence with demolition of the existing buildings. This phase would be followed by grading and excavation for the subterranean parking levels. Building foundations would then be laid, followed by building construction, paving/concrete installation, including for the realigned portion of Bellwood Avenue, and landscape installation. The estimated quantity of excavation expected for the subterranean parking is approximately 74,800 cubic yards of export material (e.g., concrete and asphalt surfaces) and soil would be hauled from the Project Site during the demolition and excavation phase.

Construction of the Project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Project Site. In addition, fugitive dust emissions would result from demolition and construction activities. Mobile source emissions, primarily NO_X, would result from the use of construction equipment, such as dozers, loaders, and cranes. During the finishing phase of the Project, paving and the application of architectural coatings (e.g., paints) would potentially release VOCs. The assessment of construction air quality impacts considers each of these potential sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions.

The emissions levels in Table IV.B-5 on page IV.B-54 represent the highest daily emissions projected to occur during each year of construction. As presented in Table IV.B-5, construction-related daily maximum regional construction emissions would not exceed any of the SCAQMD daily significance thresholds. **Therefore, regional construction emissions resulting from the Project would result in a less-than-significant air quality impact.**

(ii) Operation

As discussed above, SCAQMD's CalEEMod was used to calculate regional area, energy, mobile source, and stationary emissions. The Project would incorporate project design features to support and promote environmental sustainability, as discussed in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR. While these features are designed primarily to reduce greenhouse gas emissions, they would also serve to reduce criteria air pollutants discussed herein. This air quality analysis incorporates project design features associated with the Project Site's accessibility to transit and increase in diversity of uses and density. These project design features are explained further in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR.

Operational air quality impacts are assessed based on the incremental increase in emissions compared to baseline (existing) conditions. Therefore, the calculation of the Project's operational emissions would subtract the existing emissions of the current use to determine the incremental increase. Table IV.B-6 on page IV.B-55 provides Project operational emissions with incorporation of project design features. As shown in Table IV.B-6, regional emissions resulting from operation of the Project would not exceed any of the SCAQMD's daily regional operational thresholds. Therefore, air quality impacts from Project operational emissions would be less than significant.

(b) Localized Emissions

As previously discussed, the SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors in the immediate vicinity of the Project Site as a result of Project construction and operations. The thresholds are based on applicable short-term state and federal ambient air quality standards that are designed to be protective of public health, including for sensitive receptors.

(i) Construction

Project-related localized construction impacts are evaluated based on SCAQMD LST methodology which takes into account ambient pollutant concentrations. Based on SCAQMD methodology, localized emissions which exceed LSTs would also cause an exceedance of ambient air quality standards. As analyzed in Threshold (c) below,

Table IV.B-5
Estimate of Maximum Regional Project Daily Construction Emissions (pounds per day)

Construction Year	VOC[b]	NO_X	CO	SO_X	PM_{10}[c]	$PM_{2.5}$[c]
Regional Construction Emissions						
2021	5	96	39	<1	9	4
2022	3	23	27	<1	3	2
2023	11	20	26	<1	3	1
Maximum Unmitigated Construction Emissions[a]	11	96	39	<1	9	4
SCAQMD Daily Significance Thresholds	75	100	550	150	150	55
Over/(Under)	**(64)**	**(4)**	**(511)**	**(150)**	**(141)**	**(51)**
Maximum Unmitigated Construction Emissions Exceed Threshold?	No	No	No	No	No	No

Numbers may not add up exactly due to rounding.

[a] *The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix C(CalEEMod Output) of this Draft EIR.*

[b] *Please note that the SCAQMD significance threshold is in terms of VOC while CalEEMod calculates reactive organic compounds (ROG) emissions. For purposes of this analysis, VOC and ROG are used interchangeably since ROG represents approximately 99.9 percent of VOC emissions.*

[c] *Unmitigated scenario assumes compliance with SCAQMD Rule 403 requirements for fugitive dust. Dust control measures include watering three times daily and properly securing soil exporting loads prior to transport.*

Source: Eyestone Environmental, 2019.

Project-related construction emissions would not exceed localized thresholds. **Therefore, localized construction emissions resulting from the Project would result in a less-than-significant air quality impact.**

(ii) Operations

Project-related operational emissions were also evaluated based on SCAQMD LST methodology. The SCAQMD LST methodology evaluates emissions from on-site sources (e.g. water heaters, cooking appliances, HVAC). As analyzed in Threshold (c) below, Project-related operational emissions from on-site and off-site sources would not exceed localized thresholds. **Therefore, localized operational emissions resulting from the Project would result in a less-than-significant air quality impact.**

According to the SCAQMD, individual projects that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Air Basin is in non-attainment. As shown in Table IV.B-5 and in Table IV.B-6 on page IV.B-55, Project

Table IV.B-6
Estimate of Maximum Regional Project Daily Operational Emissions—At Project Buildout (2023)[a]

Emission Source	Pollutant Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Project						
Area	4	(1)	6	(0)	(0)	(0)
Energy (Natural Gas)	<1	<1	<1	<1	<1	<1
Mobile[b]	(0)	(0)	(0)	<1	<1	<1
Stationary	<1	1	1	<1	<1	<1
Total Proposed Uses Emissions	5	<1	7	(0)	<1	<1
SCAQMD Significance Threshold	55	55	550	150	150	55
Over/(Under)	**(50)**	**(55)**	**(543)**	**(150)**	**(150)**	**(55)**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Numbers may not add up exactly due to rounding.

[a] *The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix C (CalEEMod Output) of this Draft EIR. The table reflects net emissions (i.e., Project emissions less existing emissions).*

[b] *Project generated vehicle trips would be lower than existing trips, resulting in a net decrease in mobile source emissions*

[b] *Area source emissions accounts for a reduction in emissions (e.g., 82 percent reduction in NO_X emissions) with implementation of GHG-PDF-2 (prohibit installation of fireplaces within residential units).*

[c] *Subsequent to release of the most current version of CalEEMod (Version 2016.3.2), the 2019 Title 24 standards went into effect January 1, 2020. CalEEMod is currently based on 2016 Title 24 standards. The analysis conservatively includes a 10-percent reduction in the CalEEMod calculated energy use to account for compliance with 2019 Title 24 standards.*

Source: Eyestone Environmental, 2020.

construction and operational daily emissions at the Project Site would not exceed any of the SCAQMD's regional thresholds, respectively. As analyzed below in Threshold (c), construction and operation of the Project also would have a less-than-significant impact with regard to localized emissions. **As such, the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard, and impacts would be less than significant.**

(2) Mitigation Measures

Project-level impacts related to Threshold (b) would be less than significant during construction and operation of the Project. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to Threshold (b) during both construction and operation of the Project were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (c): Expose sensitive receptors to substantial pollutant concentrations.

(1) Impact Analysis

(a) Construction

(i) On-Site Construction Activities (Criteria Pollutants)

As discussed above in the Methodology subsection, the localized construction air quality analysis was conducted using the methodology promulgated by the SCAQMD. Look-up tables provided by the SCAQMD were used to determine localized construction emissions thresholds for the Project.[80] LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are based on the most recent background ambient air quality monitoring data (2016–2018) for the Project area as presented in Table IV.B-2 on page IV.B-22. Although the trend shown in Table IV.B-2 demonstrates that ambient air quality is improving in the area (decreasing for PM and CO, and remaining stable for NO_2), the localized construction emissions analysis conservatively did not apply a reduction in background pollutant concentrations for subsequent years of construction (i.e., 2021-2023). By doing so, the allowable pollutant increment to not exceed an ambient air quality standard is more stringent. The analysis is conservatively based on existing background ambient air quality monitoring data (2016–2018).

Maximum on-site daily construction emissions for NO_X, CO, PM_{10}, and $PM_{2.5}$ were calculated using CalEEMod and compared to the applicable SCAQMD LSTs for SRA 2 based on a 2.2-acre site. Potential impacts were evaluated at the closest off-site sensitive receptor, which are residential uses directly adjacent and east of the Project Site. The closest receptor distance on the SCAQMD mass rate LST look-up tables is 25 meters. Based on SCAQMD LST methodology, projects with boundaries located closer than 25 meters to the nearest receptor (such as the Project) should use the LSTs for receptors located at 25 meters.[81]

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[80] *SCAQMD, LST Methodology Appendix C-Mass Rate LST Look-up Table, revised October 2009.*

[81] *SCAQMD, Final Localized Significance Threshold Methodology, revised July 2008.*

The maximum daily localized emissions from Project construction and LSTs are presented in Table IV.B-7 on page IV.B-58 and maximum construction emissions would not exceed the SCAQMD-recommended localized screening thresholds for NO_X, CO, PM_{10} and $PM_{2.5}$. **As a result, Project-related on-site construction activities would result in a less than significant impact with regard to localized emissions, and no mitigation measures are required.**

(ii) On-Site Construction Activities (Toxic Air Contaminants)

The greatest potential for TAC emissions during construction would be from diesel particulate emissions associated with heavy equipment operations. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology. Given the short-term construction schedule of approximately 34 months, the Project would not result in a long-term (i.e., 70-year) source of TAC emissions. Additionally, the SCAQMD CEQA guidance does not require a heath risk assessment (HRA) for short-term construction emissions. It is, therefore, not necessary to evaluate long-term cancer impacts from construction activities which occur over a relatively short duration. In addition, there would be no residual emissions or corresponding individual cancer risk after construction as all construction equipment and trucks would no longer be operating on-site. **As such, Project-related TAC impacts during construction would be less than significant.**

(b) Operation

(i) On-Site Operational Activities (Criteria Pollutants)

Operation of the Project would not introduce any major new sources of air pollution within the Project Site. Emissions estimates for criteria air pollutants from on-site sources are presented in Table IV.B-8 on page IV.B-59. The SCAQMD LST mass rate look-up tables, which apply to projects that have active areas that are less than or equal to 5 acres in size, were used to evaluate potential localized impacts. As shown in Table IV.B-8, on-site operational emissions would not exceed any of the LSTs. Therefore, localized on-site operational emissions resulting from the Project would result in a less-than-significant air quality impact.

(ii) Off-Site Operational Activities (CO "Hot Spots" Analysis)

Consistent with the CO methodology above, if a project intersection does not exceed 400,000 vehicles per day, then the project does not need to prepare a detailed CO hot spot analysis.

Table IV.B-7
Estimate of Maximum Localized Daily Project Construction Emissions
(pounds per day)

Construction Year	NO_X	CO	PM_{10}	$PM_{2.5}$
2021	43	27	4	2
2022	18	19	<1	<1
2023	16	19	<1	<1
Maximum Unmitigated Daily Localized Emissions	43	27	4	2
SCAQMD Localized Significance Thresholds[b]	**127**	**861**	**7**	**4**
Over/(Under)	**(84)**	**(835)**	**(3)**	**(2)**
Exceed Threshold?	**No**	**No**	**No**	**No**

Numbers may not add up exactly due to rounding.

[a] *Potential localized construction impacts were evaluated using SCAQMD's LSTs for Source Receptor Area 2. The SCAQMD Daily Significance Thresholds are based on the 2.22 acre Project Site and were interpolated between the 2 acre and 5 acre thresholds. The closest sensitive receptors are residential uses directly adjacent to the Project Site. The localized threshold is based on a 25 meter receptor distance which is the closest receptor distance on the SCAQMD mass rate LST look-up table.*

Source: Eyestone Environmental, 2019.

At buildout of the Project, the highest average daily trips at an intersection under the Future With Project Conditions[82] would be approximately 74,000 trips at the Beverly Glen Boulevard and Santa Monica Boulevard intersection,[83] which is significantly below the daily traffic volumes that would be expected to generate CO exceedances as evaluated in the 2003 AQMP.[84] This daily trip estimate is based on the peak hour conditions of the intersection. There is no reason unique to the Air Basin meteorology to conclude that the CO concentrations at the Beverly Glen Boulevard and Santa Monica Boulevard intersection would exceed the 1-hour CO standard if modeled in detail, based on the studies undertaken for the 2003 AQMP.[85] In addition, the Project would result in a net decrease in

[82] *As defined in Section IV.I, Transportation, of this Draft EIR, the Future With Project Conditions is a traffic scenario that provides projected traffic volumes and an assessment of operating conditions under future conditions with the addition of Project-generated traffic.*

[83] *Gibson Transportation Consulting, Transportation Assessment for Senior Residential Community at the Bellwood Project, February 2021, revised April 2021. Please refer to Appendix C, Page C-68 for trip calculations.*

[84] *The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm, which indicates that the most stringent 1-hour CO standard (20.0 ppm) would likely not be exceeded until the daily traffic at the intersection exceeded more than 400,000 vehicles per day.*

[85] *It should be noted that CO background concentrations within the vicinity of the modeled intersection have substantially decreased since preparation of the 2003 AQMP. In 2003, the 1-hour background CO concentration was 5 ppm and has decreased to 2 ppm in 2014.*

Table IV.B-8
Estimate of Maximum Localized Project Daily Operational Emissions—At Project Buildout (2023)[a]
(pounds per day)

Emission Source	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	(1)	6	<1	<1
Energy (Natural Gas)	<1	<1	<1	<1
Stationary	1	1	<1	<1
On-Site Total	**<1**	**7**	**<1**	**<1**
SCAQMD Significance Threshold[b]	**127**	**861**	**2**	**1**
Over/(Under)	**(127)**	**(854)**	**(2)**	**(1.0)**
Exceed Threshold?	**No**	**No**	**No**	**No**

Numbers may not add up exactly due to rounding.

[a] *The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix C (CalEEMod Output) of this Draft EIR. The table reflects net emissions (i.e., Project emissions less existing emissions).*

[b] *Potential localized operational impacts were evaluated using SCAQMD's LSTs for Source Receptor Area 2. The SCAQMD Daily Significance Thresholds are based on the 2.2-acre Project Site and were interpolated between the 2-acre and 5-acre thresholds. The closest sensitive receptors are residential uses directly adjacent and east of the Project Site. The localized threshold is based on a 25-meter receptor distance which is the closest receptor distance on the SCAQMD mass rate LST look-up table.*

Source: Eyestone Environmental, 2019.

vehicle trips when accounting for existing uses. Therefore, the Project does not trigger the need for a detailed CO hotspots model and would not cause any new or exacerbate any existing CO hotspots. **As a result, impacts related to localized mobile-source CO emissions are considered less than significant.** The supporting data for this analysis is included in Appendix C of this Draft EIR.

(iii) Toxic Air Contaminants

When considering potential air quality impacts under CEQA, consideration is given to the location of sensitive receptors within close proximity of land uses that emit TACs. CARB has published and adopted the *Air Quality and Land Use Handbook: A Community Health Perspective*, which provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities).[86] The SCAQMD adopted similar recommendations in its *Guidance Document for*

[86] *CARB, Air Quality and Land Use Handbook, a Community Health Perspective, April 2005.*

Addressing Air Quality Issues in General Plans and Local Planning.[87] Together, the CARB and SCAQMD guidelines recommend siting distances for both the development of sensitive land uses in proximity to TAC sources and the addition of new TAC sources in proximity to existing sensitive land uses.

(i) On-Site Sources

The primary sources of potential air toxics associated with Project operations include diesel particulate matter from delivery trucks (e.g., truck traffic on local streets and idling on adjacent streets) and, to a lesser extent, facility operations (e.g., natural gas fired boilers). However, these activities, and the land uses associated with the Project, are not considered land uses that generate substantial TAC emissions. It should be noted that the SCAQMD recommends that HRAs be conducted for substantial individual sources of diesel particulate matter (e.g., truck stops and warehouse distribution facilities that generate more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units) and has provided guidance for analyzing mobile source diesel emissions.[88] The Project would not include these types of land uses and is not considered to be a substantial source of diesel particulate matter warranting a refined HRA since daily truck trips to the Project Site would not exceed 100 trucks per day or more than 40 trucks with operating transport refrigeration units.[89] In addition, the CARB-mandated ATCM limits diesel-fueled commercial vehicles (delivery trucks) to idle for no more than five minutes at any given time, which would further limit diesel particulate emissions.

Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes (e.g., chrome plating, electrical manufacturing, petroleum refinery). The Project would not include these types of potential industrial manufacturing process sources. It is expected that quantities of hazardous TACs generated on-site (e.g., cleaning solvents, paints, landscape pesticides, etc.) for the types of proposed land uses would be below thresholds warranting further study under the California Accidental Release Program (CalARP). As such, the Project would not release substantial amounts of TACs, and impacts on human health would be less than significant.

As the Project would not contain substantial TAC sources and is consistent with the CARB and SCAQMD guidelines, the Project would not result in the exposure

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[87] *SCAQMD, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, May 6, 2005.*

[88] *SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, 2002.*

[89] *Although the Project will include a loading dock, the Project consists of residential uses. It is anticipated that truck activity would be minimal with 1-2 trucks per day if any.*

of off-site sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0, and potential TAC impacts would be less than significant.

.**Based on the above, the Project would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant.**

(2) Mitigation Measures

Project-level impacts related to Threshold (c) would be less than significant during construction and operation of the Project. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to Threshold (c) during construction and operation of the Project were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (d): Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

As discussed in Section VI, Other CEQA Considerations, of this Draft EIR, and in the Initial Study prepared for the Project, which is included as Appendix A of this Draft EIR, the Project would not create objectionable odors impacting a substantial number of people. **Thus, impacts with respect to Threshold (d) would be less than significant. No further analysis is required.**

e. Cumulative Impacts

(1) Impact Analysis

As discussed above, the SCAQMD recommends evaluating cumulative impacts for individual projects based on whether the project exceeds the SCAQMD's recommended daily thresholds for project-specific impacts for those pollutants for which the Air Basin is in non-attainment. Thus, the cumulative analysis of air quality impacts follows SCAQMD's guidance such that construction or operational Project emissions will be considered cumulatively considerable if Project-specific emissions exceed an applicable SCAQMD recommended significance threshold.

As shown in Table IV.B-5 and Table IV.B-6 on pages IV.B-54 and IV.B-55, respectively, Project construction and operational daily emissions at the Project Site would

not exceed any of the SCAQMD's regional thresholds, respectively. Further, construction and operation of the Project would have a less-than-significant impact on localized emissions and TACs.

Accordingly, regional, localized, and TAC emissions during construction and operation of the Project would not be cumulatively considerable.

(2) Mitigation Measures

Cumulative impacts related to air quality would be less than significant during construction and operation of the Project. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts related to air quality during both construction and operation of the Project were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

IV. Environmental Impact Analysis

C. Energy

1. Introduction

This section of the Draft EIR provides the content and analysis required by Public Resources Code (PRC) Section 21100(b)(3) and described in Appendix F to the Guidelines for the Implementation of the California Environmental Quality Act (CEQA) (14 California Code of Regulations [CCR] Sections 15000 et seq.) and the Energy section of Appendix G to the Guidelines. In accordance with CEQA and Appendix F, Energy Conservation, of the CEQA Guidelines, in order to assure that energy implications are considered in project decisions, EIRs are required to include a discussion of the potential significant energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (PRC Section 21100(b)(3)).

Consistent with the goals of Appendix F to conserve energy by decreasing overall per capita energy consumption, decreasing reliance on fossil fuels, and increasing reliance on renewable energy sources, and related questions in Appendix G, this section analyzes the Project's potential impacts on energy resources, focusing on the following three energy resources: electricity, natural gas, and transportation-related energy (petroleum-based fuels). This section evaluates the demand for energy resources attributable to the Project and makes a determination as to whether the Project would result in a potentially significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction and operation and whether the Project would conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Appendix G to the Guidelines, includes questions to assist lead agencies when assessing a project's potential energy impacts.

This section also demonstrates whether the current and planned electrical, natural gas, and petroleum-based fuel supplies and distribution systems are adequate to meet the Project's forecasted energy consumption. The information presented herein is based, in part, on the *Energy Calculations for Senior Residential Community at the Bellwood Project* prepared by Eyestone Environmental which is included as Appendix D of this Draft EIR.

2. Environmental Setting

a. Regulatory Framework

(1) Federal

First established by Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFE standards. Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.[1]

When these standards are raised, automakers respond by creating a more fuel-efficient fleet. The NHTSA sets standards to increase CAFE levels rapidly over the next several years, which will improve the nation's energy security and save consumer's money at the gas pump, while also reducing greenhouse gas (GHG) emissions. In 2012, the NHTSA established final passenger car and light truck CAFE standards for model years 2017 through 2021, which the agency projects will require in model year 2021, on average, a combined fleet-wide fuel economy of 40.3 to 41.0 miles per gallons (mpg).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.[2]

On April 2, 2018, the USEPA signed the Mid-term Evaluation Final Determination which found that the model year 2022–2025 GHG standards are not appropriate and should

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[1] *For more information on the CAFE standards, refer to www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy, accessed November 11, 2020.*

[2] *The emission reductions attributable to the regulations for medium- and heavy-duty trucks were not included in the Project's emissions inventory due to the difficulty in quantifying the reductions. Excluding these reductions results in a more conservative (i.e., higher) estimate of emissions for the Project.*

be revised.[3] On August 24, 2018, the USEPA and NHTSA published a proposal to freeze the model year 2020 standards through model year 2026 and to revoke California's waiver under the Clean Air Act to establish more stringent standards.[4] On September 27, 2019, the USEPA withdrew the waiver it had previously provided to California for the State's GHG and Zero-Emission Vehicle (ZEV) programs under Section 209 of the Clean Air Act.[5] The withdrawal of the waiver became effective November 26, 2019. In response, several states including California have filed a lawsuit challenging the withdrawal of the EPA waiver.[6] As of December 2020, the lawsuit is still ongoing.

On August 2, 2018, USEPA and NHTSA proposed the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule to amend the existing CAFE and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and to establish new standards covering model years 2021 through 2026.[7] On March 31, 2020, USEPA and NHTSA issued the SAFE Vehicles Rule, setting fuel economy and carbon dioxide standards that increase 1.5 percent in stringency each year from model years 2021 through 2026.[8]

(a) Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation,

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[3] *Federal Register, Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles, www.federalregister.gov/documents/2018/04/13/2018-07364/mid-term-evaluation-of-greenhouse-gas-emissions-standards-for-model-year-2022-2025-light-duty, accessed November 11, 2020.*

[4] *Regulations, The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, www.regulations.gov/document?D=EPA-HQ-OAR-2018-0283-0756, accessed November 11, 2020.*

[5] *84 Federal Register 51310.*

[6] *United States District Court for the District Court of Columbia, State of California vs. Chao, Case 1:19-cv-02826, 2019.*

[7] *Federal Register, Notice of Proposed Rulemaking, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021—2026 Passenger Cars and Light Trucks, www.federalregister.gov/documents/2018/08/24/2018-16820/the-safer-affordable-fuel-efficient-safe-vehicles-rule-for-model-years-2021-2026-passenger-cars-and, accessed November 11, 2020.*

[8] *Federal Register, Final Rule, The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks.*

energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;

- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by the USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."[9]

(2) State

(a) California Building Standards Code (Title 24)

(i) California Building Energy Efficiency Standards (Title 24, Part 6)

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) were adopted to ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. On May 9, 2018, the CEC adopted the 2019 Title 24 Standards, went into effect on January 1, 2020. The 2019 standards continue to improve upon the previous (2016) Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings.[10] The 2019 Title 24 Standards represent "challenging but achievable design and construction practices" that represent "a major step towards meeting the Zero Net Energy (ZNE) goal."[11] Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent

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[9] *A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.*

[10] *CEC, 2019 Building Energy Efficiency Standards.*

[11] *CEC, 2019 Building Energy Efficiency Standards, p. iv.*

less energy than those under the 2016 standards. Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades.[12]

(ii) California Green Building Standards (Title 24, Part 11)

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, went into effect on January 1, 2017. The 2016 CALGreen Code includes mandatory measures for non-residential development related to site development; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality.[13] The CalGreen code is updated regularly with the latest version (2019) in effect since January 1, 2020. Most mandatory measure changes in the 2019 CALGreen Code from the previous 2016 CALGreen Code were related to the definitions and to the clarification or addition of referenced manuals, handbooks, and standards. For example, several definitions related to outdoor water use were clarified to present a more generic reference to irrigation requirements for residential developments. In addition, the 2019 CALGreen Code resulted in minor changes to voluntary measures related to landscaping water usage and indoor air quality. Compliance with the CALGreen Code is enforced through the building permit process.

(b) California's Renewable Portfolio Standard

First established in 2002 under Senate Bill (SB) 1078, California's Renewable Portfolio Standards (RPS) require retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020.[14] The California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) jointly implement the RPS program. The CPUC's responsibilities include: (1) determining annual procurement targets and enforcing compliance; (2) reviewing and approving each investor-owned utility's renewable energy procurement plan; (3) reviewing contracts for RPS-eligible energy; and (4) establishing the standard terms and conditions used in contracts for eligible renewable energy.[15] The CEC's responsibilities include: (1) certifying renewable facilities as eligible for the RPS; and (2) designing and implementing a tracking and verification system to ensure that renewable energy output is counted only once for the

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[12] *CEC, 2019 Building Energy Efficiency Standards, Fact Sheet.*

[13] *California Building Standards Commission, Guide to the 2016 California Green Building Standards Code Nonresidential, January 2017.*

[14] *CPUC, California Renewables Portfolio Standard (RPS), www.cpuc.ca.gov/RPS_Homepage/, accessed November 11, 2020.*

[15] *CPUC, California Renewables Portfolio Standard (RPS), www.cpuc.ca.gov/RPS_Homepage/, accessed November 11, 2020.*

purpose of the RPS and verifying retail product claims in California or other states. In 2018, SB 100, discussed further below, increased the RPS to 60 percent by 2030 and requires all the state's electricity to come from carbon-free resources by 2045.

(c) Senate Bill 350

Senate Bill (SB) 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. SB 350 is the implementation of some of the goals of Executive Order B-30-15, issued in April 2015, which established a new statewide policy goal to reduce greenhouse gas (GHG) emissions 40 percent below their 1990 levels by 2030. The objectives of SB 350 are: (1) to increase the procurement of electricity from renewable sources from 33 percent to 50 percent by 2030; and (2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation by 2030.[16]

(d) Senate Bill 100

Senate Bill (SB) 100, signed September 10, 2018, is the 100 Percent Clean Energy Act of 2018. SB 100 updates the goals of California's Renewable Portfolio Standard and SB 350, as discussed above, to the following: achieve 50 percent renewable resources target by December 31, 2026, and achieve a 60-percent target by December 31, 2030. SB 100 also requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.[17]

(e) Assembly Bill 1493 (AB 1493)/Pavley Regulations

AB 1493 (commonly referred to as CARB's Pavley regulations) was the first legislation to regulate GHG emissions from new passenger vehicles. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles (cars and light-duty trucks) for model years 2009–2016.[18] After adopting these initial GHG standards for passenger vehicles, CARB adopted continuing standards for future model years. It was expected that the Pavley regulations would reduce GHG emissions from California's passenger vehicles by about 30 percent in 2016, while improving fuel efficiency

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[16] *Senate Bill 350 (2015–2016 Reg, Session) Stats 2015, ch. 547.*

[17] *Senate Bill 100 (2017–2018 Reg. Session) Stats 2018, ch. 312.*

[18] *CARB, Clean Car Standards—Pavley, Assembly Bill 1943, www.arb.ca.gov/cc/ccms/ccms.htm, last reviewed January 11, 2017, accessed May 11, 2021.*

and reducing motorists' costs.[19] While the main purpose is to reduce GHG emissions, the Pavley regulations would also result in better fuel efficiency. In comparison to the Federal CAFE standard of 35 miles per gallon (mpg), the California average fuel economy would be 43 mpg in 2020.[20]

(f) California Air Resources Board Advanced Clean Cars Program

Closely associated with the Pavley regulations, the Advanced Clean Cars emissions-control program was approved by CARB in 2012.[21] The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles for model years 2015–2025.[22] The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.[23] In March 2017, CARB voted unanimously to continue with the vehicle GHG emission standards and the ZEV program for cars and light trucks sold in California through 2025.[24] In particular, implementation of the ZEV and PHEV regulations reduce transportation fuel consumption by increasing the number of vehicles that are partially or fully electric-powered.

On September 27, 2019, the USEPA withdrew the waiver it had previously provided to California for the State's GHG and ZEV programs under Section 209 of the Clean Air Act.[25] The withdrawal of the waiver became effective November 26, 2019. In response, several

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[19] *CARB, Clean Car Standards—Pavley, Assembly Bill 1943, www.arb.ca.gov/cc/ccms/ccms.htm, last reviewed January 11, 2017, accessed May 11, 2021.*

[20] *CARB, Addendum to February 25 Technical Assessment, Comparison of Greenhouse Gas Reductions for the United States and Canada under ARB Regulations and Proposed 2011–2015 Model Year Fuel Economy Standards, May 8, 2008.*

[21] *CARB, California's Advanced Clean Cars Program, www.arb.ca.gov/msprog/acc/acc.htm, last reviewed by CARB January 18, 2017, accessed May 11, 2021.*

[22] *CARB, California's Advanced Clean Cars Program, www.arb.ca.gov/msprog/acc/acc.htm, last reviewed by CARB January 18, 2017, accessed May 11, 2021.*

[23] *CARB, California's Advanced Clean Cars Program, www.arb.ca.gov/msprog/acc/acc.htm, last reviewed by CARB January 18, 2017, accessed May 11, 2021.*

[24] *CARB, News Release, CARB finds vehicle standards are achievable and cost-effective, www.arb.ca.gov/newsrel/newsrelease.php?id=908, accessed May 17, 2018.*

[25] *84 FR 51310*

states including California have filed a lawsuit challenging the withdrawal of the EPA waiver.[26] As of December 2020, the lawsuit is still ongoing.

(i) Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

The Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling (Title 13, CCR, Division 3, Chapter 10, Section 2485) was adopted to reduce public exposure to diesel particulate matter and other air contaminants by limiting the idling of diesel-fueled commercial motor vehicles. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given location. This measure applies to diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. Reducing idling of diesel-fueled commercial motor vehicles reduces the amount of petroleum-based fuels used by the vehicle.

(ii) CARB's In-Use Off-Road Diesel Fueled Fleets Regulation

Since off-road vehicles that are used in construction and other related industries can last 30 years or longer, most of those that are in service today are still part of an older fleet that do not have emission controls. In 2007, CARB approved the "In-Use Off-Road Diesel Fueled Fleets Regulation" to reduce emissions from existing (in-use) off-road diesel vehicles that are used in construction and other industries. This regulation sets an anti-idling limit of five minutes for all off-road vehicles 25 horsepower and up. It also establishes emission rates targets for the off-road vehicles that decline over time to accelerate turnover to newer, cleaner engines and require exhaust retrofits to meet these targets. Revised in October 2016, the regulation enforced off-road restrictions on fleets adding vehicles with older tier engines, and started enforcing beginning July 1, 2014. By each annual compliance deadline, a fleet must demonstrate that it has either met the fleet average target for that year, or has completed the Best Available Control Technology (BACT) requirements. Large fleets have compliance deadlines each year from 2014 through 2023, medium fleets each year from 2017 through 2023, and small fleets each year from 2019 through 2028.

(g) Sustainable Communities Strategy (SB 375)

The Sustainable Communities and Climate Protection Act of 2008, or Senate Bill 375 (SB 375), coordinates land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction mandates established in AB 32. SB 375

[26] *United States District Court for the District Court of Columbia, State of California vs. Chao, Case 1:19-cv-02826, 2019.*

specifically requires each Metropolitan Planning Organization (MPO) to prepare a "sustainable communities strategy" (SCS) as part of its Regional Transportation Plan (RTP), which is required by the state and federal government, that will achieve GHG emission reduction targets set by CARB for the years 2020 and 2035 by reducing vehicle-miles traveled (VMT) from light duty vehicles through the development of more compact, complete and efficient communities.[27]

The Project Site is located within the planning jurisdiction of the Southern California Association of Governments (SCAG). SCAG's first-ever SCS was included in the 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy (2012–2035 RTP/SCS), which was adopted by SCAG in April 2012. SCAG has since adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS) and the 2020–2045 RTP/SCS.[28] The goals and policies of the SCS that reduce VMT (and result in corresponding decreases in transportation-related fuel consumption) focus on transportation and land use planning that include building infill projects, locating residents closer to where they work and play, and designing communities so there is access to high quality transit service. Specific goals of the 2020–2045 RTP/SCS include reducing greenhouse gas emissions and improve air quality; leverage new transportation technologies and data-driven solutions that result in more efficient travel; and encourage development of diverse housing types in areas that are supported by multiple transportation options. These goals would serve to reduce transportation fuel usage. See further discussion below.

(h) Senate Bill 1389

Senate Bill (SB) 1389 (Public Resources Code Sections 25300–25323) requires the development of an integrated plan for electricity, natural gas, and transportation fuels. The CEC must adopt and transmit to the Governor and Legislature an Integrated Energy Policy Report (IEPR) every two years. In 2018, the CEC decided to write the Integrated Energy Policy Report in two volumes. Volume I, which was published on August 1, 2018, highlights the implementation of California's policies and the role they have played in establishing a clean energy economy. Volume II was adopted February 20, 2019, provides more detail on several key energy issues and encompasses new analyses.[29] The IEPR contains recommendations on energy usage policies such as decarbonizing buildings, doubling energy efficiency savings, increasing flexibility in the electrical system to integrate more renewable energy, and reducing petroleum use in cars and trucks by up to 50 percent.

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[27] *CARB, Sustainable Communities, www.arb.ca.gov/cc/sb375/sb375.htm, page last updated April 26, 2018, accessed May 11, 2021.*

[28] *SCAG, 2016 RTP/SCS, dated April 2016. SCAG 2020–2045 RTP/SCS, dated September 2020*

[29] *2018 Integrated Energy Policy Report, Volume I, August 2018.*

(i) California Environmental Quality Act

Appendix F of the CEQA Guidelines provides a list of energy-related items that may be included throughout the various chapters of an EIR, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. In addition, Appendix G provides questions for the lead agency to consider in the discussion of energy use in an EIR, where topics are applicable or relevant to the project, as detailed below in Subsection 3.a.

(3) Regional

As discussed in Section IV.E, Land Use and Planning, of this Draft EIR, SCAG's 2016–2040 RTP/SCS presents a long-term transportation vision through the year 2040 for the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. On April 7, 2016, the SCAG Regional Council adopted the 2016 RTP/SCS, the mission of which is "leadership, vision and progress which promote economic growth, personal well-being, and livable communities for all Southern Californians." The 2016–2040 RTP/SCS includes land use strategies that focus on urban infill growth and walkable, mixed-use communities in existing urbanized and opportunity areas. More mixed-use, walkable, and urban infill development would be expected to accommodate a higher proportion of growth in more energy-efficient housing types like townhomes, apartments, and smaller single-family homes, as well as more compact commercial building types. Furthermore, the 2016–2040 RTP/SCS includes transportation investments and land use strategies that encourage carpooling, increase transit use, active transportation opportunities, and promoting more walkable and mixed-use communities, which would potentially help to reduce VMT.

The 2020–2045 RTP/SCS was adopted by SCAG on September 3, 2020. It was determined by the California Air Resources Board (CARB) on October 30, 2020, that the 2020–2045 RTP/SCS would meet the region's GHG reduction target. The goals and policies of the 2020–2045 RTP/SCS are similar to, and consistent with, those of the 2016–2040 RTP/SCS. For purposes of this analysis, both SCAG's 2016–2040 RTP/SCS and 2020–2045 RTP/SCS are discussed.

The 2020–2045 RTP/SCS vision for the region incorporates a range of best practices for increasing transportation choices, reducing dependence on personal automobiles, further improving air quality and encouraging growth in walkable, mixed-use communities with ready access to transit infrastructure and employment. More and varied housing types and employment opportunities would be located in and near job centers, transit stations and walkable neighborhoods where goods and services are easily accessible via shorter trips.

The 2016–2040 and 2020–2045 RTP/SCS also establishes High-Quality Transit Areas (HQTA), which are described as generally walkable transit villages or corridors that are within 0.5-mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours.[30] Local jurisdictions are encouraged to focus housing and employment growth within HQTAs to reduce VMT. The Project Site is located within a HQTA as designated by the 2020–2045 RTP/SCS.[31] The Project Site is also located approximately 0.5-mile south of the Metro Purple Line station at Constellation Boulevard and Avenue of the Stars that is currently being constructed. In addition, the Project Site is served by six Metro bus lines, one Culver City Bus and three Santa Monica Big Blue Bus lines.

(4) Local

(a) City of Los Angeles Green Building Code

To achieve the goals outlined in its policy documents addressing climate change, in April 2008, the City adopted the Green Building Program Ordinance to address the impacts of new development. In 2011, 2014, 2016, and 2019, Chapter IX, Article 9, of the Los Angeles Municipal Code (LAMC), referred to as the Los Angeles Green Building Code, was amended to incorporate various provisions of the CALGreen Code. Specific mandatory requirements and elective measures are provided for three categories: (1) low-rise residential buildings; (2) nonresidential and high-rise residential buildings; and (3) additions and alterations to nonresidential and high-rise residential buildings. Article 9, Division 5 includes mandatory measures for newly constructed nonresidential and high-rise residential buildings. Mandatory measures include installation of electrical raceways to future electric vehicle supply equipment (EVSE), reduce water use by 20 percent compared to maximum allowable water use per plumbing fixture as required by the LAMC, and use of roofing material to reduce the heat island effect.

(b) City of Los Angeles Sustainable City pLAn/L.A.'s Green New Deal

In April 2019, Mayor Eric Garcetti released the Green New Deal, a program of actions designed to create sustainability-based performance targets through 2050 designed to advance economic, environmental, and equity objectives. L.A.s Green New Deal is the first four-year update to the City's first Sustainable City pLAn that was released in 2015. The 2019 Sustainable City pLAn/L.A.'s Green New Deal has established targets, such as 100-percent renewable energy by 2045, installation of 10,000 publicly available EV chargers

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[30] *SCAG, 2020–2045 RTP/SCS, p. 23.*

[31] *SCAG, 2020–2045 RTP/SCS; Exhibit 3.8: High-Quality Transit Areas in the SCAG Region for 2045 Plan, p. 90.*

by 2022 and 28,000 by 2028, diversion of 100 percent of waste by 2050, and recycling of 100 percent of wastewater by 2035.

(c) City of Los Angeles Solid Waste Programs and Ordinances

The recycling of solid waste materials also contributes to reduced energy consumption. Specifically, when products are manufactured using recycled materials, the amount of energy that would have otherwise been consumed to extract and process virgin source materials is reduced. For example, in 2015, 3.61 million tons of aluminum were produced by recycling in the United States, saving enough energy to provide electricity to 7.5 million homes.[32] In 1989, California enacted Assembly Bill 939 (AB 939), the California Integrated Waste Management Act which establishes a hierarchy for waste management practices such as source reduction, recycling, and environmentally safe land disposal.[33] The City of Los Angeles includes programs and ordinances related to solid waste. They include: (1) the City of Los Angeles Solid Waste Management Policy Plan, which was adopted in 1993 and is a long-range policy plan promoting source reduction for recycling for a minimum of 50 percent of the City's waste by 2000 and 70 percent of the waste by 2020; (2) the RENEW LA Plan, which is a Resource Management Blueprint with the aim to achieve a zero waste goal through reducing, reusing, recycling, or converting the resources now going to disposal so as to achieve an overall diversion level of 90 percent or more by 2025; (3) the Waste Hauler Permit Program (Ordinance 181,519), which requires all private waste haulers collecting solid waste, including construction and demolition waste, to obtain AB 939 Compliance Permits and to transport construction and demolition waste to City certified construction and demolition processing facilities; and (4) the Exclusive Franchise System Ordinance (Ordinance No. 182,986), which, among other requirements, sets maximum annual disposal levels and specific diversion requirements for franchised waste haulers in the City to promote solid waste diversion from landfills in an effort to meet the City's zero waste goals. These solid waste reduction programs and ordinances help to reduce the number of trips to haul solid waste, therefore reducing the amount of petroleum-based fuel, and also help to reduce the energy used to process solid waste.

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[32] *American Geosciences Institute, How Does Recycling Save Energy?, www.americangeosciences.org/critical-issues/faq/how-does-recycling-save-energy, accessed November 11, 2020..*

[33] *CalRecycle, History of California Solid Waste Law, 1985–1989, www.calrecycle.ca.gov/laws/legislation/calhist/1985to1989.htm, accessed November 11, 2020.*

b. Existing Conditions

(1) Electricity

Electricity, a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components, including substations and transformers that lower transmission line power (voltage) to a level appropriate for on-site distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid. Conveyance of electricity through transmission lines is typically responsive to market demands.

Energy capacity, or electrical power, is generally measured in watts (W) while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If ten 100 W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is one million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is one billion watt-hours.

The Los Angeles Department of Water and Power (LADWP) provides electricity throughout the City of Los Angeles and many areas of the Owens Valley, serving approximately 4 million people within a service area of approximately 465 square miles, excluding the Owens Valley. Electricity provided by the LADWP is divided into two planning districts: Valley and Metropolitan. The Valley Planning District includes the LADWP service area north of Mulholland Drive, and the Metropolitan Planning District includes the LADWP service area south of Mulholland Drive. The Project Site is located within LADWP's Metropolitan Planning District.

LADWP generates power from a variety of energy sources, including hydropower, coal, gas, nuclear sources, and renewable resources, such as wind, solar, and geothermal sources. According to LADWP's 2017 Power Strategic Long-Term Resources Plan, the LADWP has a net dependable generation capacity greater than 7,531 MW.[34] In 2017, the LADWP power system experienced an instantaneous peak demand of 6,432 MW.[35] Approximately 32 percent of LADWP's 2018 electricity purchases were from renewable

[34] *LADWP, 2017 Power Strategic Long-Term Resources Plan.*

[35] *LADWP, 2017 Retail Electric Sales and Demand Forecast, p. 6.*

sources, which is similar to the 31 percent statewide percentage of electricity purchases from renewable sources.[36]

LADWP supplies electrical power to the Project Site from electrical service lines located in the Project vicinity. Existing electricity usage was estimated based on the same methodology contained in the GHG analysis included in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR (California Emissions Estimator Model [CalEEMod] Version 2016.3.2). It is estimated that existing uses on the Project Site currently consume approximately 683,895 kWh of electricity per year.[37]

(2) Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs, mainly located outside the State, and delivered through high-pressure transmission pipelines. The natural gas transportation system is a nationwide network, and, therefore, resource availability is typically not an issue. Natural gas provides almost one-third of the state's total energy requirements and is used in electricity generation, space heating, cooking, water heating, industrial processes, and as a transportation fuel. Natural gas is measured in terms of cubic feet (cf).

Natural gas is provided to the Project Site by the Southern California Gas Company (SoCalGas). SoCalGas is the principal distributor of natural gas in Southern California, serving residential, commercial, and industrial markets. SoCalGas serves approximately 21.8 million customers in more than 500 communities encompassing approximately 24,000 square miles throughout Central and Southern California, from the City of Visalia to the Mexican border.[38]

SoCalGas receives gas supplies from several sedimentary basins in the western United States and Canada, including supply basins located in New Mexico (San Juan Basin), West Texas (Permian Basin), the Rocky Mountains, and Western Canada as well as local California supplies.[39] The traditional, southwestern United States sources of natural gas will

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[36] *California Energy Commission, Utility Annual Power Content Labels for 2018, www.energy.ca.gov/programs-and-topics/programs/power-source-disclosure/power-content-label-pcl-copy/annual-power, accessed February 18, 2021.*

[37] *Eyestone Environmental, Energy Calculations for Senior Residential Community at the Bellwood Project. See Appendix D of this Draft EIR.*

[38] *SoCalGas, Company Profile, www.socalgas.com/about-us/company-info.shtml, accessed November 11, 2020.*

[39] *California Gas and Electric Utilities, 2018 California Gas Report, p. 80.*

continue to supply most of SoCalGas' natural gas demand. The Rocky Mountain supply is available but is used as an alternative supplementary supply source, and the use of Canadian sources provide only a small share of SoCalGas supplies due to the high cost of transport.[40] Gas supply available to SoCalGas from California sources averaged 323 million cf per day in 2017 (the most recent year for which data are available).[41] SoCalGas supplies natural gas to the Project Site from natural gas service lines located in the Project vicinity. It is estimated that existing uses on the Project Site currently consume approximately 1,947,257 cf of natural gas per year.[42]

(3) Transportation Energy

According to the CEC, transportation accounts for nearly 40 percent of California's total energy consumption in 2017.[43] In 2018, California consumed 15.6 billion gallons of gasoline and 3.1 billion gallons of diesel fuel.[44,45] Petroleum-based fuels currently account for 90 percent of California's transportation energy sources.[46] However, the state is now working on developing flexible strategies to reduce petroleum use. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHGs from the transportation sector, and reduce VMT. Accordingly, gasoline consumption in California has declined. The CEC predicts that the demand for gasoline will continue to decline over the next 10 years, and there will be an increase in the use of alternative fuels.[47] According to CARB's EMFAC Web Database, Los Angeles County on-road transportation sources consumed 4.1 billion gallons of gasoline and 634 million gallons of diesel fuel in 2019.[48]

The existing on-site land uses currently generate a demand for transportation-related fuel use as a result of vehicle trips to and from the Project Site. The estimate of annual VMT

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[40] *U.S. Energy Information Administration, California State Profile and Energy Estimates, www.eia.gov/state/print.php?sid=CA, accessed May 11, 2021.*

[41] *California Gas and Electric Utilities, 2018 California Gas Report, p. 80.*

[42] *Eyestone Environmental, Energy Calculations for Senior Residential Community at the Bellwood Project. See Appendix D of this Draft EIR.*

[43] *CEC, 2016 Integrated Energy Policy Report, docketed January 18, 2017, p. 4.*

[44] *California Board of Equalization, Net Taxable Gasoline Gallons 10-Year Report.*

[45] *California Board of Equalization, Net Taxable Diesel Gallons 10-Year Report.*

[46] *CEC, 2016–2017 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program, March 2016.*

[47] *CEC, 2015 Integrated Energy Policy Report, docketed June 29, 2016, p. 113.*

[48] *California Air Resources Board, EMFAC2017 Web Database.*

associated with the existing Project Site uses is 2,214,856 VMT per year.[49] This translates to 86,796 gallons of gasoline and 14,567 gallons of diesel per year.[50] Persons traveling to and from the Project Site also have the option of using public transportation to reduce transportation-related fuel use. Specifically, two transit service providers operate lines within the Project Site area, including Metro, Culver City Bus and Santa Monica Big Blue Bus which are within 0.25-mile of the site. Antelope Valley Transit Authority, Santa Clarita Transit, and LADOT Commuter Express are also located within 0.5-mile of the site. As discussed in Section IV.I, Transportation, of this Draft EIR, the Project Site is located approximately 0.5-mile from the future Metro Purple Line rail station at Constellation Boulevard and Avenue of the Stars. For further discussion of public transit lines that serve the Project area, refer to Section IV.I, Transportation, of this Draft EIR.

3. Project Impacts

a. Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the Project would have a significant impact related to energy if it would:

Threshold (a): Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Threshold (b): Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

With regard to Threshold (a), this analysis relies upon Appendix F of the CEQA Guidelines, prepared in response to the requirement in PRC Section 21100(b)(3), which states that an EIR shall include a detailed statement setting forth "[m]itigation measures proposed to minimize significant effects of the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy."

In addition, with regard to potential impacts to energy, the *L.A. CEQA Thresholds Guide* states that a determination of significance shall be made on a case-by case basis, considering the following factors:

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[49] *Eyestone Environmental, Energy Calculations for Senior Residential Community at the Bellwood Project. See Appendix D of this Draft EIR.*

[50] *Eyestone Environmental, Energy Calculations for Senior Residential Community at the Bellwood Project. See Appendix D of this Draft EIR.*

- The extent to which the project would require new (off-site) energy supply facilities and distribution infrastructure; or capacity-enhancing alterations to existing facilities;
- Whether and when the needed infrastructure was anticipated by adopted plans; and
- The degree to which the project design and/or operations incorporate energy-conservation measures, particularly those that go beyond City requirements.

In accordance with Appendix F and the *L.A. CEQA Thresholds Guide*, the following factors will be considered in determining whether this threshold of significance is met:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity;
3. The effects of the project on peak and base period demands for electricity and other forms of energy;
4. The degree to which the project complies with existing energy standards;
5. The effects of the project on energy resources;
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.
7. The degree to which the project design and/or operations incorporate energy-conservation measures, particularly those that go beyond City requirements.
8. Whether the project conflicts with adopted energy conservation plans.

With regard to Threshold (b), the Project will be evaluated for consistency with adopted energy conservation plans and policies relevant to the Project. Such adopted energy conservation plans and policies include Title 24 energy efficiency requirements, CalGreen Code, and City building codes.

b. Methodology

Appendix F provides the following topics that the lead agency may consider in the discussion of energy use in an EIR, where topics are applicable or relevant to the project:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;
- The effects of the project on local and regional energy supplies and on requirements for additional capacity;
- The effects of the project on peak and base period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources;
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

(1) Construction

During Project construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control (including supply and conveyance) and, on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. Electricity usage associated with the supply and conveyance of water used for dust control during construction was calculated using CalEEMod.[51] Electricity used to power lighting, electronic equipment, and other construction activities necessitating electrical power was calculated based on data provided in South Coast Air Quality Management District (SCAQMD) construction surveys (i.e., construction activity, horsepower, load factor, and hours of use per day).[52]

In terms of natural gas, construction activities typically do not involve the consumption of natural gas.

Project construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and delivery and haul truck trips (e.g., the hauling of demolition material to off-site reuse and disposal facilities). Fuel consumption from on-site heavy-duty construction equipment was calculated based on the equipment mix

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[51] *California Air Pollution Control Officers Association, CalEEMod™ version 2016.3.2 User's Guide, November 2017.*

[52] *CalEEMod Users Guide. Appendix E1, Technical Source Documentation. October 2017.*

and usage factors provided in the CalEEMod construction output files included in Appendix D of this Draft EIR. The total horsepower was then multiplied by fuel usage estimates per horsepower-hour included in Table A9-3-E of the SCAQMD *CEQA Air Quality Handbook*. Fuel consumption from construction worker, vendor, and delivery/haul trucks was calculated using the trip rates and distances provided in the CalEEMod construction output files. Total VMT was then calculated for each type of construction-related trip and divided by the corresponding county-specific miles per gallon factor using CARB's EMFAC 2017 model. EMFAC provides the total annual VMT and fuel consumed for each vehicle type. Consistent with CalEEMod, construction worker trips were assumed to include 50 percent light duty gasoline auto and 50 percent light duty gasoline trucks. Construction vendor and delivery/haul trucks were assumed to be heavy-duty diesel trucks. Refer to Appendix D of this Draft EIR for detailed calculations.

(2) Operation

Annual consumption of electricity (including electricity usage associated with the supply and conveyance of water) and natural gas was calculated using demand factors provided in CalEEMod as part of the GHG analysis included in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR.

Energy impacts associated with transportation during operation were also assessed. Daily trip generation used in this analysis was based on the *Transportation Assessment for the Senior Residential Community at the Bellwood Project* dated February 2021 and revised in April 2021 (see Appendix H of this Draft EIR). As discussed therein, the trip generation and VMT for the Project was determined based on the LADOT VMT Calculator for the applicable land uses. Based on this annual VMT, gasoline and diesel consumption rates were calculated using the county-specific miles per gallon calculated using EMFAC2017. The vehicle fleet mix for vehicles anticipated to visit the Project Site was calculated consistent with the CalEEMod default for Los Angeles County. Supporting calculations are provided in Appendix D of this Draft EIR. These calculations were used to determine if the Project would cause the wasteful, inefficient and/or unnecessary consumption of energy as required by Appendix F guidelines.

The Project's estimated energy demands were also analyzed relative to LADWP's and SoCalGas' existing and planned energy supplies in 2023 (i.e., the Project buildout year) to determine if these two energy utility companies would be able to meet the Project's energy demands.

c. Project Design Features

The Project would include project design features designed to improve energy efficiency as set forth in Section IV.B, Air Quality, and Section IV.D, Greenhouse Gas

Emissions, of this Draft EIR, including Project Design Features AQ-PDF-1, GHG-PDF-1, and GHG-PDF-2. These measures include, but are not limited to, installation of occupancy-controlled light switches and thermostats, installation of time-controlled lighting, provisions to encourage pedestrian and bicycle use, use of power pole electricity during construction activities and limits on the number of natural gas fueled fireplaces on the Project Site.

d. Analysis of Project Impacts

Threshold (a): Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?

(1) Impact Analysis

The following analysis considers the eight criteria factors in the Thresholds of Significance subsection above to determine whether Threshold (a) would be exceeded.

> *(a) The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.*

As discussed above, the Project would consume energy during construction and operational activities. Sources of energy for these activities would include electricity usage, natural gas consumption (during operation only), and transportation fuels such as diesel and gasoline. The analysis below includes the Project's energy requirements and energy use efficiencies by fuel type for each stage of the Project (construction, operations, maintenance and removal activities).[53]

For purposes of this analysis, Project maintenance would include activities such as repair of structures, landscaping and architectural coatings, which could potentially use electricity and petroleum-based fuels. Energy usage related to Project maintenance activities are assumed to be included as part of Project operations. If the Project were to be built and were to be removed at the end-of-life phase, Project removal activities would include demolition or abandonment of the Project Site. However, it is not known when the Project would be removed. Therefore, analysis of energy usage related to Project removal activities would be speculative. For this reason, energy usage related to Project removal was not analyzed.

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[53] *Removal activities relate to the life of a project.*

(i) Construction

During Project construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control and, on a limited basis, powering lights, electric equipment, or other construction activities necessitating electrical power. Electricity from these construction activities would be limited in comparison to existing operational electricity usage at the Project Site given that construction activities would be intermittent and temporary. As discussed below, construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Project construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment on the Project Site, construction worker travel to and from the Project Site, and delivery and haul truck trips (e.g., hauling of demolition material to off-site reuse and disposal facilities).

As shown in Table IV.C-1 on page IV.C-22, a total of 17,268 kWh of electricity, 33,541 gallons of gasoline, and 153,345 gallons of diesel is estimated to be consumed during Project construction. Project construction is expected to start in 2021 and be completed by 2023.

Electricity

During construction of the Project, electricity would be consumed to supply and convey water for dust control and, on a limited basis, may be used to power lighting, electric equipment, and other construction activities necessitating electrical power. Electricity would be supplied to the Project Site by LADWP and would be obtained from the existing electrical lines that connect to the Project Site. This would be consistent with suggested measures in the *L.A. CEQA Thresholds Guide* and AQ-PDF-1 which would require the use of electricity from power poles rather than temporary gasoline or diesel powered generators where available.

As shown in Table IV.C-1, a total of approximately 17,268 kWh of electricity is anticipated to be consumed during Project construction. The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed, and would cease upon completion of construction. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. In addition, long-term building construction lighting (longer than 120 days) is subject to Title 24 requirements which includes limits on the lighting wattage, which would result in the conservation of energy.[54] As such, the demand for electricity during construction would not cause wasteful, inefficient, and unnecessary use of energy.

[54] *California Building Energy Efficiency Standards, Title 24, Part 6, §110.9, §130.0, and §130.2.*

Table IV.C-1
Summary of Energy Use During Project Construction[a]

Fuel Type	Quantity
Electricity	
Water Consumption	2,047 kWh
Lighting, electric equipment, and other construction activities necessitating electrical power[b]	15,221 kWh
Total Electricity	**17,268 kWh**
Gasoline	
On-Road Construction Equipment[c]	33,541 gallons
Off-Road Construction Equipment[d]	0 gallons
Total Gasoline	**33,541 gallons**
Diesel	
On-Road Construction Equipment[c]	88,202 gallons
Off-Road Construction Equipment[d]	65,142 gallons
Total Diesel	**153,345 gallons**

kWh = kilowatt hours

[a] *Detailed calculations are provided in Appendix D of this Draft EIR. Totals may not add up due to rounding.*

[b] *Electricity usage is based on SCAQMD construction site survey data and typical requirements for power generators. Such electricity demand would be temporary, limited, and would cease upon the completion of construction.*

[c] *On-Road equipment includes worker trips, vendor trips, and haul trips.*

[d] *Off-Road equipment includes bulldozers, backhoes, cranes, and other types of heavy-duty equipment. Off-road equipment is assumed to be powered with diesel fuel.*

Source: Eyestone Environmental, 2020.

The estimated construction electricity usage represents approximately 2 percent of the estimated net annual operational demand which, as discussed below, would be within the supply capabilities of LADWP.[55] Moreover, construction electricity usage would be less than the electricity usage from existing uses removed at the Project Site.

Natural Gas

Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would not

[55] *The percentage is derived by taking the total amount of electricity usage during construction (17,268 kWh) and dividing that number by the total amount of net electricity usage during operation (899,296 kWh) to arrive at 2 percent.*

be supplied to support Project construction activities; thus there would be no demand generated by construction.

Transportation Energy

The petroleum-based fuel use summary provided in Table IV.C-1 on page IV.C-22 represents the amount of transportation energy that could potentially be consumed during Project construction based on a conservative set of assumptions, provided in Appendix D, of this Draft EIR. As shown, on- and off-road vehicles would consume an estimated 33,541 gallons of gasoline and approximately 153,345 gallons of diesel fuel throughout the Project's construction (an approximately 3-year duration). For comparison purposes, the fuel usage during Project construction would represent approximately 0.001 percent of the 2021 annual on-road gasoline-related energy consumption and 0.01 percent of the 2021 annual diesel fuel–related energy consumption in Los Angeles County, as shown in Appendix D, of this Draft EIR. Moreover, the temporary construction-period gasoline consumption would be offset by removal of existing uses. For construction-period diesel consumption, the removal of existing uses would also partially offset the temporary net increase in diesel fuel consumption.

Trucks and equipment used during proposed construction activities would comply with CARB's anti-idling regulations as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. In addition to reducing criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in efficient use of construction-related energy and reduce fuel consumption. In addition, on-road vehicles (i.e., haul trucks, worker vehicles) would be subject to Federal and State fuel efficiency requirements. Therefore, Project construction activities would comply with existing energy standards with regard to transportation fuel consumption. As such, the demand for petroleum-based fuel during construction would not cause wasteful, inefficient, and unnecessary use of energy.

Construction Materials

The energy analysis does not include a full life cycle analysis of energy usage that would occur over the production/transport of materials during the production process used during the construction of the project or used during the operational life of the project, or the end of life for the materials and processes that would occur as an indirect result of the project. Estimating the energy usage associated with these processes would be too speculative for meaningful consideration, would require analysis beyond the current state-of-the-art in impact assessment, and may lead to a false or misleading level of precision in reporting. Manufacture and transport of materials during the production process related to Project construction and operation is expected to be regulated under regulatory energy efficiency requirements. It should be noted that transport of materials to the Project Site is included in the energy analysis above. Therefore, it is assumed that energy usage related to

construction and operational materials would be consistent with current regulatory requirements regarding energy usage.

(ii) Operation

During operation of the Project, energy would be consumed for multiple purposes, including, but not limited to, heating/ventilating/air conditioning (HVAC); refrigeration; lighting; and the use of electronics, equipment, and machinery. Energy would also be consumed during Project operations related to water usage, solid waste disposal, and vehicle trips. As shown in Table IV.C-2 on page IV.C-25, the Project's net new energy demand would be approximately 899,296 kWh of electricity per year, 539,350 cf of natural gas per year. When taking into account removal of existing uses, the Project would result in a net increase of 229 gallons of gasoline per year and 42 gallons of diesel fuel per year consumed.

Electricity

As shown in Table IV.C-2, with compliance with Title 24 standards and applicable CALGreen Code requirements, buildout of the Project would result in a projected net increase in the on-site demand for electricity totaling approximately 889,296 kWh per year. In addition to complying with CALGreen Code, the Applicant would also implement GHG-PDF-1 in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, which states that the design of new buildings would incorporate sustainability features (e.g., Energy Star–labeled products) and incorporate water conservation features, such as drip/subsurface irrigation. Also, under GHG-PDF-1, the Project would use LED lighting, which would reduce electricity used for lighting purposes compared to non-LED lighting. These measures would reduce the Project's energy demand in comparison to the Project without such reduction features. In addition, the Project would be subject to the 2019 Title 24 standards. Residential and nonresidential buildings built in compliance with the 2019 standards will use about 30 to 53 percent less energy than those under the 2016 standards.[56] This analysis conservatively includes a 10-percent reduction from the 2016 standards in the CalEEMod calculated energy use to account for compliance with 2019 Title 24 standards.

LADWP is required to procure at least 33 percent of their energy portfolio from renewable sources by 2020. The current sources procured by LADWP include wind, solar, and geothermal sources. These sources account for 32 percent of LADWP's overall energy mix in 2018, the most recent year for which data are available.[57] This represents the available off-site renewable sources of energy that would meet the Project's energy demand.

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[56] *CEC, 2019 Building Energy Efficiency Standards, Fact Sheet.*

[57] *LADWP 2018 Power Content Label.*

Table IV.C-2
Summary of Annual Net New Energy Use During Project Operation[a]

Source	Existing Energy Demand	Project Energy Demand	Net Energy Demand
Electricity			
Building	558,067 kWh	1,360,427 kWh	802,360 kWh
Water[b]	125,828 kWh	184,383 kWh	58,555 kWh
EV Chargers[c]	0 kWh	38,381 kWh	38,381 kWh
Total Electricity[d]	683,895 kWh	1,583,191 kWh	**899,296 kWh**
Natural Gas			
Building	1,947,257 cf	2,409,465 cf	462,208 cf
Fireplaces[e]	0 cf	77,143 cf	77,143 cf
Total Natural Gas[d]	1,947,257 cf	2,486,608 cf	**539,350 cf**
Transportation			
Gasoline	39,879 gal	40,107 gal	229 gal
Diesel	7,360 gal	7,402 gal	42 gal
Total Transportation[f]	47,240 gal	47,510 gal	**271 gal**

cf = cubic feet

gal = gallons

kWh = thousand kilowatt hours

[a] *Detailed calculations are provided in Appendix D of this Draft EIR. Totals may not add up due to rounding.*

[b] *Calculations assume compliance with Project Design Feature GHG-PDF-1 provided in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR.*

[c] *Consistent with City code requirements, The Project would provide at least 30 percent of Code-required parking spaces with the capability of supporting electric vehicle supply equipment (EVSE) and that a minimum of 10 percent of Code-required parking spaces would be further equipped with EV charging stations.*

[d] *Electricity and natural gas estimates assume compliance with applicable 2019 CALGreen requirements and implementation of GHG-PDF-1, in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR.*

[e] *Calculations assume compliance with Project Design Feature GHG-PDF-2 provided in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR*

[f] *Transportation fuel estimates include project characteristics entered into the VMT Calculator (bicycle parking). Fuel estimates conservatively do not include reductions in fuel usage associated with implementation of EV Chargers.*

Source: Eyestone Environmental, 2020.

The use of renewable energy would indirectly reduce use of fossil fuels required for electricity generation (natural gas, coal, oil). While the electricity usage rate for a given land use would not be directly affected by the availability of renewable energy, the consumption of fossil fuels required for electricity generation would be reduced.

In addition, the Project would comply with Section 110.10 of Title 24, which includes mandatory requirements for solar-ready buildings which would allow for installation of solar panels at a later date, and, as such, would not preclude the potential use of alternative sources of energy.

Based on LADWP's 2017 Power Strategic Long-Term Resources Plan, LADWP forecasts that its total energy sales in the 2023–2024 fiscal year (the Project's buildout year) will be 23,033 GWh of electricity.[58,59] As such, the Project-related net increase in annual electricity consumption of 899,296 kWh per year would represent less than 0.004 percent of LADWP's projected sales in 2023. In addition, as previously described, the Project would incorporate a variety of energy conservation measures to reduce energy usage.

Natural Gas

As provided in Table IV.C-2 on page IV.C-25, with compliance with Title 24 standards and applicable CALGreen Code requirements, buildout of the Project is projected to generate a net increase in the on-site demand for natural gas totaling approximately 539,350 cf per year. As discussed above, in addition to complying with applicable regulatory requirements regarding energy conservation (e.g., California Building Energy Efficiency Standards and CALGreen Code), the Project would implement project design features to further reduce energy use. Specifically, the Applicant would implement GHG-PDF-1 in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, which states that the design of new buildings would incorporate sustainability features (e.g., Energy Star–labeled products). As discussed above, the Project would be subject to the 2019 Title 24 standards. However, CalEEMod default energy usage parameters are based on 2016 Title 24 standards. This analysis conservatively includes a 10-percent reduction in the CalEEMod calculated energy use to account for compliance with 2019 Title 24 standards. In addition, the Project would implement GHG-PDF-2 which limits the use of natural gas fireplaces to common areas and the top floor residential dwelling units. In comparison to CalEEMod defaults which assumes natural gas fireplaces in most residential units, implementation of GHG-PDF-2 would reduce natural gas usage by 21 percent. In order to meet the Title 24 energy performance requirement, the Project may also include use of efficient water heaters, cooking equipment and other major support appliances.

As stated above, the Project's estimated net increase in demand for natural gas is 539,350 cf per year, or approximately 1,478 cf per day. Based on the 2020 California Gas Report, the California Energy and Electric Utilities estimates natural gas consumption within

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[58] *LADWP defines its future electricity supplies in terms of sales that will be realized at the meter.*

[59] *LADWP, 2017 Power Strategic Long-Term Resources Plan, Appendix A, Table A-1.*

SoCalGas' planning area will be approximately 2.40 billion cf/day in 2023 (the Project's buildout year).[60] The Project would account for approximately 0.00006 percent of the 2023 forecasted consumption in SoCalGas' planning area. In addition, as previously described, the Project would incorporate a variety of energy conservation measures to reduce energy usage.

Transportation Energy

During operation, Project-related traffic would result in the consumption of petroleum-based fuels related to vehicular travel to and from the Project Site. As noted above, the Project Site is located in a HQTA designated by SCAG, which indicates that the Project Site is an appropriate site for increased density and employment opportunities from a "smart growth," regional planning perspective. [61],[62] As discussed in Section IV.I, Transportation, of this Draft EIR, the Project Site is located approximately 0.5-mile from the future Metro Purple Line rail station, as well as the Metro, Culver City Bus, Santa Monica Big Blue Bus lines, Santa Clarita Transit and LADOT Commuter Express which would provide service within the Project vicinity and would provide employees, residents, and guests with various public transportation opportunities. In accordance with the LAMC, the Project would provide bicycle parking spaces consistent with code.

The Project's location near mass transit and installation of bicycle parking spaces would encourage alternative modes of transportation, reducing VMT and associated energy usage. As such, the Project would minimize transportation fuel consumption through the reduction of VMT, as described above and discussed further in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR. With incorporation of these VMT reducing measures and

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[60] *California Gas and Electric Utilities, 2020 California Gas Report pp. 144–145. Interpolated between 2021 and 2035 estimates.*

[61] *SCAG, 2020–2045 RTP/SCS, Exhibit 3.8: High Quality Transit Areas in the SCAG Region for 2045 Plan, p. 90.*

[62] *Smart growth is an approach to development that encourages a mix of building types and uses, diverse housing and transportation options, development within existing neighborhoods, and community engagement. Smart growth includes the following ten principles: mix land uses; take advantage of compact building design; create a range of housing opportunities and choices; create walkable neighborhoods; foster distinctive, attractive communities with a strong sense of place; preserve open space, farmland, natural beauty, and critical environmental areas; strengthen and direct development towards existing communities; provide a variety of transportation choices; make development decisions predictable, fair, and cost effective; and encourage community and stakeholder collaboration in development decisions. Source: U.S. Environmental Protection Agency and the International City/County Management Association, This is Smart Growth, 2014; Smart Growth America, What is smart growth?, https://smartgrowthamerica.org/our-vision/what-is-smart-growth/, accessed November 11, 2020; SCAG, Glossary, "Smart Growth Principles," https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_glossary-plan_0.pdf?1606001349, accessed April 27, 2021.*

taking into account removal of existing uses and associated vehicle trips, net transportation-fuel usage would be reduced by 24 percent for both gasoline and diesel fuels.

As summarized in Table IV.C-2 on page IV.C-25, when accounting for the measures that would be implemented to reduce VMT as well as removal of existing uses, the Project's estimated petroleum-based fuel usage would result in a net increase of 229 gallons of gasoline and 42 gallons of diesel per year, or a total of 271 gallons of petroleum-based fuels annually.

(iii) Summary of Energy Requirements and Energy Use Efficiencies

As previously discussed, CEQA Guidelines Appendix F and Appendix G recommend quantification of a project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed. The Project's energy requirements were calculated based on the methodology contained in CalEEMod for electricity and natural gas usage. Project VMT data from the VMT Calculator output was used to calculate transportation fuel usage. The calculations also took into account energy efficiency measures such as Title 24, CalGreen Code, and vehicle fuel economy standards. Table IV.C-1 on page IV.C-22 and Table IV.C-2 provide a summary of Project construction and operational energy usage, respectively. During Project construction activities, a total of 17,268 kWh of electricity would be consumed along with 186,886 gallons of transportation fuel (gasoline and diesel). During Project operations, a total of 899,296 kWh of electricity, 539,350 cf of natural gas along with 271 gallons of transportation fuel would be consumed on an annual basis. When accounting for project design features and increased energy efficiency measures, operational electricity usage would be reduced by 6 percent, natural gas usage would be reduced by 21 percent when compared to a project without energy efficiency measures. Transportation fuel usage would be reduced by 24 percent when compared to a project without VMT reducing features. Details are provided in Appendix D of this Draft EIR.

(b) The effects of the project on local and regional energy supplies and on requirements for additional capacity

(i) Construction

As discussed above, electricity would be intermittently consumed during the conveyance of the water used to control fugitive dust, as well as to provide electricity for temporary lighting and other general construction activities. The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed and would cease upon completion of construction. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. The estimated construction electricity usage, as shown in Table IV.C-1, represents approximately

2 percent of the estimated net annual operational demand which, as discussed below, would be within the supply and infrastructure service capabilities of LADWP.[63] Furthermore, the electricity demand during construction would be offset with the removal of the existing on-site uses which currently generate a demand for electricity. Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would not be supplied to support Project construction activities; thus there would be no demand generated by construction, resulting in a net decrease when compared to existing operations. As discussed above, transportation fuel usage during Project construction activities would represent approximately 0.001 percent of gasoline usage and 0.01 percent of diesel usage within Los Angeles County, respectively. As energy consumption during Project construction activities would be relatively negligible, the Project would not affect regional energy consumption during the construction period.

(ii) Operation

Based on LADWP's 2017 Power Strategic Long-Term Resources Plan, LADWP forecasts that its total energy sales in the 2023–2024 fiscal year (the Project's buildout year) will be 23,033 GWh of electricity.[64,65] As such, the Project-related net increase in annual electricity consumption of 899,296 kWh per year would represent less than 0.004 percent of LADWP's projected sales in 2023.[66] Furthermore, LADWP has confirmed that the Project's electricity demand can be served by the facilities in the Project area.[67] Therefore, it is anticipated that LADWP's existing and planned electricity capacity and electricity supplies would be sufficient to support the Project's electricity demand.

As stated above, the Project's estimated net increase in demand for natural gas is 539,350 cf per year, or approximately 1,478 cf per day. Based on the 2020 California Gas Report, the California Energy and Electric Utilities estimated natural gas consumption within SoCalGas' planning area will be approximately 2.40 billion cf/day in 2023 (the Project's buildout year).[68] The Project would account for approximately 0.00006 percent of the 2023 forecasted consumption in SoCalGas' planning area.

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[63] *The percentage is derived by taking the total amount of electricity usage during construction (17,268 kWh) and dividing that number by the total amount of net electricity usage during operation (899,296 kWh) to arrive at 2 percent.*

[64] *LADWP defines its future electricity supplies in terms of sales that will be realized at the meter.*

[65] *LADWP, 2017 Power Strategic Long-Term Resources Plan, Appendix A, Table A-1.*

[66] *LADWP, 2017 Power Strategic Long-Term Resources Plan, December 2017, Appendix A.*

[67] *Fuscoe Engineering Inc., Water, Sewer, and Energy Infrastructure Assessment Report – Senior Residential Community at the Bellwood, February 2020. Refer to Appendix J of this Draft EIR.*

[68] *California Gas and Electric Utilities, 2018 California Gas Report p. 97.*

At buildout, the Project would result in a net increase of 229 gallons of gasoline and 42 gallons of diesel per year, or a total net increase of 271 gallons of petroleum-based fuels consumed per year, as shown in Appendix D, of this Draft EIR.

In sum, energy consumption during Project operations would be relatively negligible and energy requirements are within LADWP's and SoCalGas' service provision. Project operation would not affect regional energy supplies.

(c) The effects of the project on peak and base period demands for electricity and other forms of energy

As discussed above, electricity demand during construction and operation of the Project would have a negligible effect on the overall capacity of LADWP's power grid and base load conditions. With regard to peak load conditions, the LADWP power system experienced an all time high peak of 6,432 MW on August 31, 2017.[69] The LADWP also estimates a peak load based on two years of data known as base case peak demand to account for typical peak conditions. Based on LADWP estimates for 2017, the base case peak demand for the power grid is 5,854 MW.[70] Under peak conditions, the Project would consume 320 kW during peak load conditions.[71] In comparison to the LADWP power grid base peak load of 5,854 MW in 2017, the Project would represent approximately 0.005 percent of the LADWP base peak load conditions. In addition, LADWP's annual growth projection in peak demand of the electrical power grid of 0.4 percent would be sufficient to account for future electrical demand by the Project.[72] Therefore, Project electricity consumption during operational activities would have a negligible effect on peak load conditions of the power grid.

(d) The degree to which the project complies with existing energy standards

Although Title 24 requirements typically apply to energy usage for buildings, long-term construction lighting (greater than 120 days) providing illumination for the Project Site and staging areas would also comply with applicable Title 24 requirements (includes limits on the wattage allowed per specific area). In addition, construction equipment would comply with energy efficiency requirements contained in the Federal Energy Independence and Security Act or previous Energy Policy Acts for electrical motors and equipment.[73] Electricity and

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[69] *LADWP, 2017 Retail Electric Sales and Demand Forecast. p. 6.*

[70] *LADWP, 2017 Retail Electric Sales and Demand Forecast. p. 6.*

[71] *Eyestone Environmental, Energy Calculations for Senior Residential Community at The Bellwood Project, See Appendix D of this Draft EIR.*

[72] *LADWP, 2017 Retail Electric Sales and Demand Forecast. p. 6.*

[73] *Energy Independence and Security Act of 2007, Pub.L. 110-140.*

Natural Gas usage during Project operations presented in Table IV.C-2 on page IV.C-25 would comply with 2019 Title 24 standards and applicable CalGreen and Los Angeles Green Building Code requirements. Therefore, Project construction and operational activities would comply with existing energy standards with regards to electricity and natural gas usage.

With regard to transportation fuels, trucks and equipment used during proposed construction activities, the Project would comply with CARB's anti-idling regulations as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Although these regulations are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in efficient use of construction-related energy. During Project operations, vehicles travelling to and from the Project Site are assumed to comply with CAFE fuel economy. Project-related vehicle trips would also comply with Pavley and Low Carbon Fuel Standards which are designed to reduce vehicle GHG emissions but would also result in fuel savings in addition to CAFE standards, as required.

Based on the above, Project construction and operational activities would comply with existing energy standards with regards to electricity and natural gas usage, as well as transportation fuel consumption.

(e) Effects of the Project on Energy Resources

As discussed above, LADWP's electricity generation is derived from a mix of non-renewable and renewable sources such as coal, natural gas, solar, geothermal wind and hydropower. The LADWP's most recently adopted 2017 Power Strategic Long-Term Resources Plan identifies adequate resources (natural gas, coal) to support future generation capacity.

Natural gas supplied to Southern California is mainly sourced from out of state with a small portion originating in California. Sources of natural gas for the Southern California region are obtained from locations throughout the western United States as well as Canada.[74] According to the U.S. Energy Information Administration (EIA), the United States currently has over 80 years of natural gas reserves based on 2015 consumption.[75] Compliance with energy standards is expected to result in more efficient use of natural gas (lower consumption) in future years. Therefore, Project construction and operation activities would have a negligible effect on natural gas supply.

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[74] *California Gas and Electric Utilities, 2018 California Gas Report.*

[75] *U.S. Energy Information Administration, Frequently Asked Questions, www.eia.gov/tools/faqs/faq.php?id=58&t=8, accessed November 11, 2020.*

With regard to on-site energy resources, the Project Site does not contain any significant sources of renewable (i.e., water, solar, wind, geothermal) or non-renewable energy, such as coal, natural gas, petroleum. In addition, the Project would not generate power using non-renewable sources or associated energy transmission lines. Therefore, the Project construction and operation activities would not conflict with existing or planned energy resources.

Transportation fuels (gasoline and diesel) are produced from crude oil which is imported from various regions around the world. According to the EIA's International Energy Outlook 2019, the global supply of crude oil, other liquid hydrocarbons, and biofuels is expected to be adequate to meet the world's demand for liquid fuels through 2050.[76] The EIA's International Energy Outlook 2020 indicates that motor gasoline and distillate fuel oil's combined share of total transportation energy consumption decreases from 84 percent in 2019 to 74 percent in 2050. Increases in fuel economy standards drive the decrease in U.S. motor gasoline consumption, which declines by 19 percent through 2050.

The Project would comply with CAFE fuel economy standards, which would result in more efficient use of transportation fuels (lower consumption). Project-related vehicle trips would also comply with Pavley and Low Carbon Fuel Standards which are designed to reduce GHG emissions but would also result in fuel savings in addition to compliance with CAFE standards. Also, the Project would include provisions for alternative modes of transportation by providing for bicycle parking spaces. In addition, the Project is located within an HQTA, which would encourage use of mass transit, further reducing transportation fuel usage during Project operations. Therefore, Project construction and operation activities would have a negligible effect on the transportation fuel supply.

As discussed above in Subsection 2.a, Regulatory Framework, one of the objectives of SB 350 is to increase procurement of California's electricity from renewable sources from 33 percent to 50 percent by 2030. As of September 2018, SB 100 was signed, which would require retail sellers of electric services to increase procurement from eligible renewable energy resources to 50 percent renewable resources target by December 31, 2026, and 60 percent by December 31, 2030. Accordingly, LADWP is required to procure at least 60 percent of their energy portfolio from renewable sources by 2030. The current sources of renewable energy procured by LADWP include wind, solar, and geothermal sources. These sources account for 32 percent of LADWP's overall energy mix in 2018, the most recent year for which data are available.[77] This represents the available off-site renewable sources of

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[76] *U.S. Energy Information Administration, Frequently Asked Questions, www.eia.gov/tools/faqs/faq.php?id=58&t=8, accessed November 11, 2020.*

[77] *California Energy Commission, Utility Annual Power Content Labels for 2018 (Version: July 2019).*

energy that would meet the Project's energy demand. The Project's use of renewable energy would indirectly reduce use of fuels required for electricity generation (natural gas, coal, oil). While the Project's electricity usage rate would not be directly affected by the availability of renewable energy, the Project's usage of renewable energy would indirectly avoid consumption of fossil fuels.

With regard to on-site renewable energy sources, the Project would include the provision of conduit that is appropriate for future photovoltaic and solar thermal collectors, consistent with requirements of the LA Green Building Code. The Project would also comply with Title 24 requirements for "Solar Ready Buildings" which requires a certain area of rooftop to be set aside for installation of solar panels. However, due to the Project Site's location, other on-site renewable energy sources would not be feasible to install on-site as there are no local sources of energy from the following sources: biodiesel, biomass hydroelectric and small hydroelectric, digester gas, methane, fuel cells, landfill gas, municipal solid waste, ocean thermal, ocean wave, and tidal current technologies, or multi-fuel facilities using renewable fuels. Furthermore, wind-powered energy is not viable on the Project Site due to the lack of sufficient wind in the Los Angeles basin. Specifically, based on a map of California's wind resource potential, the Project Site is not identified as an area with wind resource potential.[78]

(f) The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives

The Project represents an infill development within an existing urbanized area that would introduce a new senior residential use on the Project Site, within an HQTA. The Project would provide 192 residential units in close proximity to retail, restaurant, entertainment and other commercial uses would allow for more residents to live closer to these areas, reducing the vehicle miles traveled. The design, which includes dedicated bicycle parking facilities with 72 bicycle parking spaces and an improved streetscape with pedestrian amenities, also encourages non-automotive forms of transportation such as walking or biking to nearby destinations. Pedestrian access would be maintained on both side of Bellwood Avenue and amenities including trees and lighting would enhance the pedestrian experience. In addition, the Project would be located approximately 0.5-mile from the future Metro Purple Line Station. In addition, the Project Site is served by the Metro Bus, Culver City Bus and Santa Monica Big Blue Bus lines which are within 0.25-mile of the site. Antelope Valley Transit Authority, Santa Clarita Transit, and LADOT Commuter Express are also located within 0.5-mile of the site. With the reduction in trips due to accessibility to mass transit and alternative modes of transportation, the Project results in a VMT reduction of approximately 23 percent (see Appendix H of this Draft EIR) compared to a Project without

[78] *CEC, Wind Resource Area & Wind Resources, 2018.*

Reduction Features, with a corresponding reduction in the Project's petroleum-based fuel usage.[79] Therefore, the Project would encourage the use of efficient transportation alternatives.

(g) The degree to which the project design and/or operations incorporate energy-conservation measures, particularly those that go beyond City requirements

The current City of Los Angeles Green Building Code requires compliance with the CalGreen Code and California's Building Energy Efficiency Standards (Title 24). Residential and nonresidential buildings built in compliance with the 2019 standards will use about 30 to 53 percent less energy than those under the 2016 standards.[80] In addition, Project Design Feature GHG-PDF-1 would incorporate sustainability features beyond 2019 Title 24 requirements such as use of Energy Star appliances, LED lighting and fenestration designed for solar orientation. Therefore, the Project would incorporate measures that are above and beyond current State and City energy conservation requirements.

Project Design Feature GHG-PDF-1 in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, of this Draft EIR, states that the Project would implement water-efficient plantings with drought-tolerant species, among other sustainability features. A reduction in water usage would in turn reduce the amount of electricity used for water conveyance. In addition, GHG-PDF-2 would also limit the number of natural gas-fueled fireplaces resulting in less natural gas consumed during operations. Therefore, the Project would incorporate measures that are above and beyond current State and City energy conservation requirements.

The City has also adopted several plans and regulations to promote the reduction, reuse, recycling, and conversion of solid waste going to disposal systems. These regulations include the City of Los Angeles Solid Waste Management Policy Plan, the RENEW LA Plan, the City of Los Angeles Space Allocation Ordinance (Ordinance No. 171,687), and the Exclusive Franchise System Ordinance (Ordinance No. 182,986). These solid waste reduction programs and ordinances help to reduce the number of trips associated with hauling solid waste, thereby reducing the amount of petroleum-based fuel consumed. Furthermore, recycling efforts indirectly reduce the energy necessary to create new products made of raw material, which is an energy-intensive process. As discussed in the Initial Study included as Appendix A of this Draft EIR, the Project would be consistent with the applicable regulations associated with solid waste. Specifically, the Project would provide adequate

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[79] *The Project without Reduction Features scenario does not account for energy efficiency measures or trip reductions.*

[80] *CEC, 2019 Building Energy Efficiency Standards, Fact Sheet.*

storage areas in accordance with Ordinance No. 171,687, which requires that development projects include an on-site recycling area or room of specified size.[81] The Project would also comply with State and City waste diversion goals, as applicable, by providing clearly marked, source-sorted receptacles to facilitate recycling. Thus, through compliance with the City's construction-related solid waste recycling programs, the Project would contribute to reduced fuel-related energy consumption.

Based on the above, with compliance with state and local energy efficiency standards, the Project would meet and/or exceed all applicable energy conservation policies and regulations.

(h) Whether the Project conflicts with adopted energy conservation plans

The Project would comply with applicable regulatory requirements for the design of new buildings, including the provisions set forth in the CALGreen Code and California's Building Energy Efficiency Standards, which have been incorporated into the City's Green Building Code.

With regard to transportation uses, the Project design would reduce VMT within the region and encourage use of alternative modes of transportation. The Project would be consistent with regional planning strategies that address energy conservation. As discussed above and in Section IV.E, Land Use and Planning, of this Draft EIR, SCAG's 2016–2040 RTP/SCS and 2020–2045 RTP/SCS focuses on creating livable communities with an emphasis on sustainability and integrated planning, and identifies mobility, economy, and sustainability as the three principles most critical to the future of the region. Also, as discussed in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, the Project would be consistent with the SCAG 2016–2040 RTP/SCS and 2020–2045 RTP/SCS, which includes goals to reduce VMT and corresponding decrease in fuel consumption. As part of the approach, the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS focuses on reducing fossil fuel use by decreasing VMT, reducing building energy use, and increasing use of renewable sources. The Project would be consistent with the energy efficiency policies emphasized in the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS. Most notably, the Project would be a residential development located in an area with nearby commercial uses with sidewalks and crosswalks in the Project vicinity to promote walking. The 2016–2040 RTP/SCS also establishes High-Quality Transit Areas (HQTA), which are described as generally walkable transit villages or corridors that are within 0.5-mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours.[82] Local

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[81] *Ordinance No. 171,687, adopted by the Los Angeles City Council on August 6, 1997.*

[82] *SCAG, 2016 RTP/SCS, p. 8.*

jurisdictions are encouraged to focus housing and employment growth within HQTAs to reduce VMT. The Project Site is located within a HQTA as designated by the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS.[83,84]The Project would provide greater proximity to neighborhood services, jobs, and residences and would be well-served by existing public transportation, including existing Metro, Culver City Bus and Santa Monica Big Blue Bus lines and a future Metro Purple Line station.

The introduction of new housing and job opportunities within a HQTA, as proposed by the Project, is consistent with numerous policies in the 2016–2040 RTP/SCS and 2020–2045 related to locating new housing and jobs near transit. The 2016–2040 RTP/SCS and 2020–2045 would result in an estimated 8-percent decrease in VMT by 2020, an 18-percent decrease in VMT by 2035, and a 21-percent decrease in VMT by 2040. Subsequent to adoption of the 2016–2040 RTP/SCS, CARB adopted in 2018 a new target requiring a 19-percent decrease in VMT for the SCAG region by 2035. This new target has been incorporated in the 2020–2045 RTP/SCS. On October 30, 2020, CARB certified the 2020–2045 RTP/SCS to meet the region's GHG emissions reduction targets consistent with SB 375.[85] The 2016–2040 RTP/SCS and 2020–2045 RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the state's GHG emission reduction goals.

As discussed in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, the Project daily per capita VMT is 9.9 miles which is 46 percent less than Los Angeles County's 18.4 daily per capita VMT for the 2040 Plan Year and 48 percent less than Los Angeles County's 19.2 daily per capita VMT for the 2045 Plan Year. This reduction in VMT is substantially better than the goals of the 2016–2040 and 2020–2045 RTP/SCS with an estimated 19-percent decrease in per capita GHG emissions from passenger vehicles by 2035.[86] In addition, the Project would comply with state energy efficiency requirements and Title 24 requirements, and would use electricity from LADWP, which has a current renewable energy mix of 32 percent. All of these features would serve to reduce the consumption of electricity, natural gas, and transportation fuel. Based on the above, the Project would not conflict with adopted energy conservation plans.

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[83] *SCAG, 2016 RTP/SCS; Exhibit 5.1: High Quality Transit Areas in the SCAG Region for 2040 Plan, p. 77.*

[84] *SCAG, 2020–2045 RTP/SCS, Connect SoCal; Exhibit 3.8 Priority Growth Areas—High-Quality Transit Areas, p. 91.*

[85] *California Air Resources Board. Executive Order G-20-239. October 30, 2020*

[86] *CARB updated the SB 375 targets for the SCAG region, requiring a 19-percent decrease in VMT by 2035 in comparison to a 2005 baseline. Implementation of the 2020–2045 RTP/SCS or the next plan is expected to fulfill and exceed the region's obligations under SB 375 with respect to meeting the State's VMT and related GHG emission reduction goals.*

(i) Conclusion Regarding Significance Threshold a

As demonstrated in the analysis above, the Project would not result in potentially significant environmental impacts due to wasteful, inefficient, and unnecessary consumption of energy resources during construction or operation. The Project's energy requirements would not significantly affect local and regional supplies or capacity. The Project's energy usage during peak and base periods would also be consistent with electricity and natural gas future projections for the region. As discussed previously, gasoline fuel usage for the region is expected to decline over the next 10 years. Transportation fuel supply is not expected to decrease significantly over this same period and supplies would be sufficient to meet Project demand. Therefore, electricity generation capacity and supplies of natural gas and transportation fuels would also be sufficient to meet the needs of Project-related construction and operations. During operations, the Project would comply with existing energy efficiency requirements such as CalGreen Code and would include energy conservation measures beyond requirements. **In summary, the Project's energy demands would comply with existing energy efficiency standards and would not cause wasteful, inefficient, or unnecessary use of energy. Therefore, Project impacts related to energy use under Threshold (a) would be less than significant during construction and operation.**

(2) Mitigation Measures

Project-level impacts related to energy use would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to energy use were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (b): Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

(1) Impact Analysis

As discussed in Subsection 3.d.(1)(a)(h) above, the energy conservation policies and plans relevant to the Project include the California Title 24 energy standards, the 2019 CALGreen Code, and the City of Los Angeles Green Building Code. As these conservation policies are mandatory under the City of LA Building Code, the Project would not conflict with applicable plans for renewable energy or energy efficiency.

With regard to transportation related energy usage, the Project would comply with goals of the SCAG's 2016–2040 RTP/SCS and 2020–2045 RTP/SCS, which incorporates VMT targets established by SB 375. The Project's residential development and proximity to public transportation would serve to reduce VMT and associated transportation fuel usage within the region. In addition, vehicle trips generated during Project operations would comply with CAFE fuel economy standards, as required. During construction activities, the Project would be required to comply with CARB anti-idling regulations and the In-Use Off-Road Diesel Fleet regulations.

Based on the above, the Project would not conflict with adopted energy conservation plans, or violate state or federal energy standards. **Therefore, Project impacts associated with regulatory consistency under Threshold (b) would be less than significant.**

(2) Mitigation Measures

Project-level impacts related to conflicts with plans would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to conflicts with plans were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

e. Cumulative Impacts

(1) Impact Analysis

(a) Threshold (a) (Wasteful, Inefficient, and Unnecessary Use of Energy)

Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. Based on the information presented in Section III, Environmental Setting, of this Draft EIR, there are six related projects located within the vicinity of the Project Site. The geographic context for the cumulative analysis of electricity is LADWP's service area and the geographic context for the cumulative analysis of natural gas is SoCalGas' service area. While the geographic context for transportation-related energy use is more difficult to define, it is meaningful to consider the Project in the context of County-wide consumption. Growth within these geographies is anticipated to increase the demand for electricity, natural gas, and transportation energy.

(i) Electricity

Although Project development would result in the use of renewable and non-renewable electricity resources during construction and operation, which could limit future availability, the use of such resources would be on a relatively small scale, would be reduced by measures making the Project more energy-efficient, and would be consistent with growth expectations for LADWP's service area. The Project also would incorporate energy efficiency measures to make the Project comply with the 2019 Title 24 standards. Residential and nonresidential buildings built in compliance with the 2019 standards will use about 30 to 53 percent less energy than those under the 2016 standards.[87] Furthermore, other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including the CALGreen Code and state energy standards under Title 24, and incorporate mitigation measures, as necessary.

Additionally, as discussed above, LADWP is required to procure at least 33 percent of their energy portfolio from renewable sources by 2020. The current sources of renewable energy procured by LADWP include wind, solar, and geothermal sources. These sources accounted for 32 percent of LADWP's overall energy mix in 2018, the most recent year for which data are available.[88] This represents the available off-site renewable sources of energy that could meet the Project's and related projects energy demand. Therefore, the Project and related projects within LADWP's service area would comply with energy conservation plans and efficiency standards required to ensure that energy is used efficiently. **As such, the Project's contribution to cumulative impacts related to wasteful, inefficient and unnecessary use of electricity would not be cumulatively considerable and, thus, would be less than significant.**

(ii) Natural Gas

Although Project development would result in the use of natural gas resources, which could limit future availability, the use of such resources would be on a relatively small scale, would be reduced by measures rendering the Project more energy-efficient, and would be consistent with regional and local growth expectations for SoCalGas' service area. The Project also would incorporate energy efficiency measures, as required by GHG-PDF-1 and reduce natural gas usage by limiting the number of natural gas-fueled fireplaces, as required by GHG-PDF-2. Furthermore, future development projects within SoCalGas' service area would be expected to incorporate energy conservation features, comply with applicable regulations including the CALGreen Code and State energy standards under Title 24, and incorporate mitigation measures, as necessary. **As such, cumulative impacts related to**

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[87] *CEC, 2019 Building Energy Efficiency Standards, Fact Sheet.*

[88] *California Energy Commission, Utility Annual Power Content Labels for 2018, (Version: July 2019).*

wasteful, inefficient and unnecessary use of natural gas would not be cumulatively considerable and, thus, would be less than significant.

(iii) Transportation Energy

Buildout of the Project, related projects, and additional forecasted growth would cumulatively increase the demand for transportation-related fuel in the state and region. As described above, at buildout, the Project would result in an increase of 229 gallons of gasoline and 42 gallons of diesel per year, or a total of 271 gallons of petroleum-based fuels consumed per year, as shown in Appendix D of this Draft EIR.

Related projects in the Project vicinity would also be infill projects locating uses near other residential and commercial uses which would reduce distance travelled as well as consumption of transportation fuel. As analyzed above, Project transportation fuel usage would represent a small percentage of total fuel consumption within Los Angeles County. While it is speculative to assess transportation fuel usage from related projects, it is expected that cumulative transportation fuel usage resulting from the Project and related projects would be consistent with projections discussed above.

Additionally, as described above, petroleum currently accounts for 90 percent of California's transportation energy sources; however, over the last decade the State has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHGs from the transportation sector, and reduce vehicle miles traveled which would reduce reliance on petroleum fuels. According to the California Department of Tax and Fee Administration, gasoline consumption has increased by 4 percent from 2010 to 2018;.[89] However, this increase is mainly due to population increases as the per capita gasoline consumption is showing a downward trend.[90] The CEC also predicts that there will be an increase in the use of alternative fuels, such as natural gas, biofuels, and electricity in future years. As with the Project, other future development projects in the vicinity of the Project Site would be expected to reduce VMT by encouraging the use of alternative modes of transportation (mass transit and bicycling) and other design features (pedestrian accessibility) that promote VMT reductions.

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[89] *California Department of Tax and Fee Administration, Fuel Taxes Statistics & Reports, www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm, accessed November 11, 2020.*

[90] *Eno Center for Transportation, How Have Different State Populations Changed Their Gasoline Consumption?, www.enotrans.org/article/how-have-different-state-populations-changed-their-gasoline-consumption/, accessed May 11, 2021.*

Furthermore, as described above, the Project would be consistent with the energy efficiency policies emphasized by the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS. Specifically, the Project would be a residential development located in an area that is characterized by a high degree of pedestrian accessibility with sidewalks and crosswalks in the Project vicinity to promote walking. The Project would provide greater proximity to neighborhood services, and would be well-served by existing public transportation, including existing Metro, Culver City Bus and Santa Monica Big Blue Bus lines and a future Metro Purple Line station. The Project also would introduce new housing and job opportunities within a HQTA, which is consistent with numerous policies in the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS related to locating new jobs near transit.[91] Although there are no per capita GHG emission reduction targets for passenger vehicles set by CARB for 2040, the 2016–2040 RTP/SCS GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2040.[92] Implementation of the 2016–2040 RTP/SCS would result in an estimated 8-percent decrease in per capita GHG emissions by 2020, 18-percent decrease in per capita GHG emissions by 2035, and 21-percent decrease in per capita GHG emissions by 2040. As discussed above, CARB updated the SB 375 targets for the SCAG region, requiring a 19-percent decrease in VMT by 2035. It is anticipated that in future years, SB 375 would have more stringent reduction targets. Implementation of the 2020–2045 RTP/SCS is expected to fulfill and exceed the region's obligations under SB 375 with respect to meeting the State's GHG emission reduction goals. In addition, the Project would further reduce VMT through such measures as transit accessibility as estimated by the VMT Calculator, which would be consistent with the reduction in transportation emission per capita provided in the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS.

Although the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS is intended to reduce GHG emissions, the reduction in VMT would also result in reduced transportation fuel consumption. By its very nature, the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS are a regional planning tool that addresses cumulative growth and resulting environmental effects. In addition, it is assumed that related projects in the Project Site vicinity would reduce VMT, consistent with the goals of the 2016–2040 RTP/SCS and 2020–2045. **Therefore, based on the above, and as the Project is consistent with the 2016–2040 RTP/SCS and 2020–**

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[91] *The City's ZIMAS identifies a portion of the Project Site as also located in Transit Priority Area as defined by Public Resources Code Section 20199. Public Resources Code Section 21099 defines a "transit priority area" as an area within 0.5-mile of a major transit stop that is "existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." Public Resources Code Section 21064.3 defines "major transit stop" as "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods."*

[92] *SCAG, 2016 RTP/SCS, April 2016, p. 153.*

2045 RTP/SCS, its contribution to cumulative impacts related to wasteful, inefficient and unnecessary use of transportation fuel would not be cumulatively considerable and, thus, would be less than significant.

(iv) Conclusion

Based on the analysis provided above, the Project's contribution to cumulative impacts related to energy consumption (i.e., electricity, natural gas, and fuel) would not result in a cumulatively considerable effect related to potentially significant environmental impacts due to the wasteful, inefficient, and unnecessary consumption of energy during construction or operation. As such, the Project's impacts would not be cumulatively considerable; therefore, cumulative energy impacts under Threshold (a) are concluded to be less than significant.

(b) Consistency with State or Local Plans

Related and other future projects within the Project area would be required to comply with energy conservation and renewable energy plans and polices described above, including Title 24, CALGreen Code, and the City of Los Angeles Green Building Code. As related projects would be required to meet the same energy consumption standards, there would be no significant cumulative impacts with regard to consistency with energy conservation plans.

Furthermore, as described above, the Project would be consistent with the policies emphasized by the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS. The Project is an infill development near transit within an existing urbanized area that would concentrate new residential uses within an HQTA, thus reducing VMT. As discussed in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, the Project results in a VMT reduction of approximately 24 percent in comparison to a standard project as estimated by CalEEMod. As discussed in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, per capita VMT is 9.9 miles, which would be consistent with the reduction in transportation emission per capita provided in the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS and with CARB's updated 2035 target. As discussed previously, this represents a per capita VMT reduction of 46 percent in comparison to the Los Angeles County VMT per capita for the 2040 Plan year and 48 percent in comparison to the Los Angeles County VMT per capita for the 2045 Plan Year when compared to SCAG regional estimates. This reduction in VMT is substantially better that the goals of the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS with an estimated 19-percent decrease in per capita GHG emissions from passenger vehicles by 2035.[93] Therefore, the Project is consistent with the 2016–2040 RTP/SCS and 2020–2045

[93] *CARB updated the SB 375 targets for the SCAG region, requiring a 19-percent decrease in VMT by 2035. Implementation of the 2020–2045 RTP/SCS would fulfill and exceed the region's obligations under SB 375 with respect to meeting the State's VMT and related GHG emission reduction goals.*

RTP/SCS and would not be cumulatively considerable with regard to consistency with energy conservation plans.

(2) Mitigation Measures

Cumulative impacts related to energy use and conflicts with plans would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance after Mitigation

Cumulative impacts related to energy use and conflicts with plans were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

IV. Environmental Impact Analysis

D. Greenhouse Gas Emissions

1. Introduction

This section of the Draft EIR provides a discussion of global climate change, existing regulations pertaining to global climate change, an evaluation of the Project's consistency with plans adopted for the reduction or mitigation of greenhouse gas (GHG) emissions, an inventory of the GHG emissions that would result from the Project, and an analysis of the potential impact of these GHG emissions. Calculation worksheets, assumptions, and model outputs used in the analysis are contained in Appendix C to this Draft EIR.

2. Environmental Setting

Climate change refers to any significant change in the measures of climate lasting for an extended period of time, including major changes in temperature, precipitation, or wind patterns, among other effects that occur over several decades. Global warming, one aspect of climate change, refers to the recent and ongoing rise in global average temperature near Earth's surface. Both human and natural factors influence Earth's climate, but rigorous analysis of all data and lines of evidence shows that most observed global warming over the past 50 years or so cannot be explained by natural causes alone and instead requires a significant role for the influence of human activities. One identified cause of global warming is an increase of greenhouse gases (GHGs) in the atmosphere. The effect of GHG emissions, particularly carbon dioxide (CO_2), on our climate has been extensively studied for decades. GHGs are those compounds in Earth's atmosphere that play a critical role in determining Earth's surface temperature. The natural warming influence of GHGs is known as the greenhouse effect.

The greenhouse effect is a process that occurs when gases in Earth's atmosphere trap the Sun's heat. Since the onset of the Industrial Revolution, human activities, especially burning coal and oil or fuel, have increased the abundance of heat-trapping gases in the atmosphere and have amplified the greenhouse effect.

As reported by the United States Environmental Protection Agency (USEPA), global carbon emissions from fossil fuels increased by over 16 times between 1900 and 2008 and by about 1.5 times between 1990 and 2008. In addition, in the Global Carbon Budget 2014 report, published in September 2014, atmospheric carbon dioxide (CO_2) concentrations in

2013 were found to be 43 percent above the concentration at the start of the Industrial Revolution, and the present concentration is the highest during at least the last 800,000 years.[1] Global increases in CO_2 concentrations are due primarily to fossil fuel use, with land use change providing another significant but smaller contribution. With regard to emissions of non-CO_2 GHG, these have also increased significantly since 1900.[2] In particular, studies have concluded that it is very likely that the observed increase in methane (CH_4) concentration is predominantly due to agriculture and fossil fuel use.[3]

The establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to GHG emissions reduction and climate change research and policy.

In August 2007, international climate talks held under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) led to the official recognition by the participating nations that global emissions of GHG must be reduced. According to the "Ad Hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol," avoiding the most catastrophic events forecast by the IPCC would entail emissions reductions by industrialized countries in the range of 25 to 40 percent below 1990 levels.

In December 2015, the US entered into the Paris Agreement which has a goal of keeping a global temperature rise this century below 2 degrees Celsius above pre-industrial levels and limit the temperature increase further to 1.5 degrees Celsius. This agreement requires that all parties report regularly on emissions and implementation efforts to achieve these goals. In November 2020, the US withdrew from the agreement, however, on January 20, 2021, President Biden has issued an executive order to have the U.S. rejoin the agreement with entry into force on February 19, 2021.[4]

With regard to the adverse effects of global warming, as reported by the Southern California Association of Governments (SCAG), "Global warming poses a serious threat to the economic well-being, public health and natural environment in Southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea levels, damage to marine

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[1] *C. Le Quéré, et al., Global Carbon Budget 2014, (Earth System Science Data, 2015, doi:10.5194/essd–7–47–2015).*

[2] *USEPA, Global Greenhouse Gas Emissions Data, www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, accessed October 20, 2020.*

[3] *USEPA, Atmospheric Concentrations of Greenhouse Gas, updated June 2015.*

[4] *The White House, Paris Climate Agreement, www.whitehouse.gov/briefing-room/statements-releases/2021/01/20/paris-climate-agreement/, accessed May 12, 2021.*

and other ecosystems, and an increase in the incidences of infectious diseases." The SCAG region, with close to half of the State's population and economic activities, is a major contributor to the global warming problem.[5]

a. GHG Background

GHGs include CO_2, CH_4, nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).[6] CO_2 is the most abundant GHG. Other GHGs are less abundant, but have higher global warming potential than CO_2. Thus, emissions of other GHGs are frequently expressed in the equivalent mass of CO_2, denoted as CO_2e. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. A general description of the aforementioned GHGs is provided in Table IV.D-1 on page IV.D-4.

Global Warming Potentials (GWPs) are one type of simplified index based upon radiative properties used to estimate the potential future impacts of emissions of different gases upon the climate system. GWP is based on a number of factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO_2, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of CO_2. The larger the GWP, the more that a given gas warms the Earth compared to CO_2 over that time period. A summary of the atmospheric lifetime[7] and GWP of selected gases is presented in Table IV.D-2 on page IV.D-5. As indicated below, GWPs range from 1 to 22,800.

b. Projected Impacts of Global Warming in California

In 2009, California adopted a statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry, and Transportation and Energy. The California Natural Resources Agency will be updating the CAS and be responsible for preparing reports to the Governor

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[5] *SCAG, The State of the Region—Measuring Regional Progress, December 2006, p. 121.*

[6] *As defined by California Assembly Bill (AB) 32 and Senate Bill (SB) 104.*

[7] *Atmospheric lifetime is defined as the time required to turn over the global atmospheric burden. Source: Intergovernmental Panel on Climate Change, IPCC Third Assessment Report: Climate Change 2001 (TAR), Chapter 4: Atmospheric Chemistry and Greenhouse Gases, 2001, p. 247.*

Table IV.D-1
Description of Identified GHGs[a]

Greenhouse Gas	General Description
Carbon Dioxide (CO_2)	An odorless, colorless GHG, which has both natural and anthropocentric sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human caused) sources of CO_2 are burning coal, oil, natural gas, and wood.
Methane (CH_4)	A flammable gas and the main component of natural gas. When one molecule of CH_4 is burned in the presence of oxygen, one molecule of CO_2 and two molecules of water are released. A natural source of CH_4 is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH_4, which is extracted for fuel. Other sources are landfills, fermentation of manure, and cattle.
Nitrous Oxide (N_2O)	A colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, race cars, and as an aerosol spray propellant.
Hydrofluorocarbons (HFCs)	Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble, and chemically unreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. Because they destroy stratospheric ozone, the production of CFCs was stopped as required by the Montreal Protocol in 1987. HFCs are synthetic man-made chemicals that are used as a substitute for CFCs as refrigerants. HFCs deplete stratospheric ozone, but to a much lesser extent than CFCs.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. The two main sources of PFCs are primary aluminum production and semi-conductor manufacturing.
Sulfur Hexafluoride (SF_6)	An inorganic, odorless, colorless, non-toxic, and non-flammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.
Nitrogen Trifluoride (NF_3)	An inorganic, non-toxic, odorless, non-flammable gas. NF_3 is used in the manufacture of semi-conductors, as an oxidizer of high energy fuels, for the preparation of tetrafluorohydrazine, as an etchant gas in the electronic industry, and as a fluorine source in high power chemical lasers.

[a] *GHGs identified in this table are ones identified in the Kyoto Protocol and other synthetic gases recently added to the IPCC's Fifth Assessment Report.*

Source: Association of Environmental Professionals, Alternative Approaches to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, Final, June 29, 2007; United States Environmental Protection Agency, Acute Exposure Guideline Levels (AEGLs) for Nitrogen Trifluoride; January 2009.

Table IV.D-2
Atmospheric Lifetimes and Global Warming Potentials

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)[a]
Carbon Dioxide (CO_2)	50–200	1
Methane (CH_4)	12 (+/-3)	25
Nitrous Oxide (N_2O)	114	298
HFC-23: Fluoroform (CHF_3)	270	14,800
HFC-134a: 1,1,1,2-Tetrafluoroethane (CH_2FCF_3)	14	1,430
HFC-152a: 1,1-Difluoroethane ($C_2H_4F_2$)	1.4	124
PFC-14: Tetrafluoromethane (CF_4)	50,000	7,390
PFC-116: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800
Nitrogen Trifluoride (NF_3)	740	17,200

[a] *Global Warming Potentials and associated CO2e values were developed by the Intergovernmental Panel on Climate Change (IPCC), and published in its Second Assessment Report (SAR) in 1996. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's SAR. The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The California Air Resources Board (CARB) reports GHG emission inventories for California using the GWP values from the IPCC AR4. Therefore, the analysis below reflects the GWP values from IPCC AR4. Although the IPCC has released AR5 with updated GWPs, CARB reports the statewide GHG inventory using the AR4 GWPs, which is consistent with international reporting standards.*

Source: IPCC, Climate Change 2007: Working Group I: The Physical Science Basis, Direct Global Warming Potentials, www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html, accessed October 20, 2020.

on the status of the CAS. The Natural Resources Agency has produced climate change assessments which detail impacts of global warming in California.[8] These include:

- Sea level rise, coastal flooding and erosion of California's coastlines would increase, as well as sea water intrusion;
- The Sierra snowpack would decline between 70 and 90 percent by the end of the century, threatening California's water supply;
- Higher risk of forest fires resulting from increasing temperatures and making forests and brush drier. Climate change will affect tree survival and growth;

[8] *State of California, Department of Justice, Office of the Attorney General, Climate Change Impacts in California, https://oag.ca.gov/environment/impact, accessed October 20, 2020.*

- Attainment of air quality standards would be impeded by increasing emissions, accelerating chemical processes, and raising inversion temperatures during stagnation episodes resulting in public health impacts;
- Habitat destruction and loss of ecosystems due to climate change affecting plant and wildlife habitats; and
- Global warming can cause drought, warmer temperatures and salt water contamination resulting in impacts to California's agricultural industry.

With regard to public health, as reported by the Center for Health and the Global Environment at the Harvard Medical School, the following are examples of how climate change can affect cardio-respiratory disease: (1) pollen is increased by higher levels of atmospheric CO_2; (2) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and (3) the incidence of forest fires is increased by drought secondary to climate change and to the lack of spring runoff from reduced winter snows. These fires can create smoke and haze, which can settle over urban populations causing acute and exacerbating chronic respiratory illness.[9]

c. Regulatory Framework

In response to growing scientific and political concern with global climate change, federal and state entities have adopted a series of laws to reduce emissions of GHGs to the atmosphere, which are discussed herein.

(1) Federal

(a) Federal Clean Air Act

The U.S. Supreme Court ruled in *Massachusetts v. Environmental Protection Agency*, 127 S.Ct. 1438 (2007), that CO_2 and other GHGs are pollutants under the federal Clean Air Act (CAA), which the USEPA must regulate if it determines they pose an endangerment to public health or welfare. The U.S. Supreme Court did not mandate that the USEPA enact regulations to reduce GHG emissions. Instead, the Court found that the USEPA could avoid taking action if it found that GHGs do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHGs contribute to climate change.

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[9] *Paul R. Epstein, et al., Urban Indicators of Climate Change, Report from the Center for Health and the Global Environment, (Harvard Medical School and the Boston Public Health Commission, August 2003), unpaginated.*

On April 17, 2009, the USEPA issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009-0171. The USEPA stated that high atmospheric levels of GHGs "are the unambiguous result of human emissions, and are very likely the cause of the observed increase in average temperatures and other climatic changes." The USEPA further found that "atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act." The findings were signed by the USEPA Administrator on December 7, 2009. The final findings were published in the Federal Register on December 15, 2009. The final rule was effective on January 14, 2010.[10] While these findings alone do not impose any requirements on industry or other entities, this action is a prerequisite to regulatory actions by the USEPA, including, but not limited to, GHG emissions standards for light-duty vehicles.

On April 4, 2012, USEPA published a proposed rule to establish, for the first time, a new source performance standard for GHG emissions. Under the proposed rule, new fossil fuel–fired electric generating units larger than 25 megawatts (MW) are required to limit emissions to 1,000 pounds of CO_2 per MW-hour (CO_2/MWh) on an average annual basis, subject to certain exceptions.

On April 17, 2012, the USEPA issued emission rules for oil production and natural gas production and processing operations, which are required by the CAA under Title 40 of the Code of Federal Regulations, Parts 60 and 63. The final rules include the first federal air standards for natural gas wells that are hydraulically fractured, along with requirements for several other sources of pollution in the oil and gas industry that were not previously regulated at the federal level.[11]

(b) Corporate Average Fuel Economy (CAFE) Standards

In response to the *Massachusetts v. Environmental Protection Agency* ruling, the George W. Bush Administration issued Executive Order 13432 in 2007, directing the USEPA, the United States Department of Transportation (USDOT), and the United States Department of Energy (USDOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency

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[10] *USEPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, Final Rule, www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean, accessed October 20, 2020.*

[11] *USEPA, 2012 Final Rules for Oil and Natural Gas Industry, April 17, 2012, www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/2012-final-rules-oil-and-natural-gas-industry, accessed October 20, 2020.*

for and GHG emissions from cars and light-duty trucks for model year 2011; in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Barack Obama issued a memorandum directing the USEPA, USDOT, USDOE, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards are projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if the standards were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On April 2, 2018, the USEPA signed the Mid-term Evaluation Final Determination which found that the model year 2022–2025 GHG standards are not appropriate and should be revised.[12] On August 24, 2018, the USEPA and NHTSA published a proposal to freeze the model year 2020 standards through model year 2026 and to revoke California's waiver under the Clean Air Act to establish more stringent standards.[13] On September 27, 2019, the USEPA withdrew the waiver it had previously provided to California for the State's GHG and ZEV programs under Section 209 of the Clean Air Act.[14] The withdrawal of the waiver became effective November 26, 2019. In response, several states including California have filed a lawsuit challenging the withdrawal of the EPA waiver.[15] As of December 2020, the lawsuit is still ongoing.

On August 2, 2018, USEPA and NHTSA proposed the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule to amend the existing CAFE and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and to establish new standards covering model years 2021 through 2026.[16] On March 31, 2020, USEPA and NHTSA

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[12] *Federal Register, Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles, www.federalregister.gov/documents/2018/04/13/2018-07364/mid-term-evaluation-of-greenhouse-gas-emissions-standards-for-model-year-2022-2025-light-duty, accessed October 20, 2020.*

[13] *Regulations, The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, www.epa.gov/regulations-emissions-vehicles-and-engines/safer-affordable-fuel-efficient-safe-vehicles-final-rule, accessed October 20, 2020.*

[14] *84 Federal Register 51310.*

[15] *United States District Court for the District Court of Columbia, State of California vs. Chao, Case 1:19-cv-02826, 2019.*

[16] *Federal Register, Notice of Proposed Rulemaking, The Safer Affordable Fuel-Efficient (SAFE)Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, www.federalregister.gov/documents/2020/04/30/2020-06967/the-safer-affordable-fuel-efficient-safe-vehicles-rule-for-model-years-2021-2026-passenger-cars-and, accessed October 20, 2020.*

issued the SAFE Vehicles Rule, setting fuel economy and carbon dioxide standards that increase 1.5 percent in stringency each year from model years 2021 through 2026.[17]

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.[18]

In August 2016, the USEPA and NHTSA finalized Phase 2 standards for medium- and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The Phase 2 standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and save vehicle owners fuel costs of about $170 billion.[19]

(c) Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately

[17] *Federal Register, Final Rule, The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks.*

[18] *The emission reductions attributable to the regulations for medium- and heavy-duty trucks were not included in the Project's emissions inventory due to the difficulty in quantifying the reductions. Excluding these reductions results in a more conservative (i.e., higher) estimate of emissions for the Project.*

[19] *U.S. EPA, EPA and NHTSA Adopt Standards to Reduce GHG and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond, August 2016.*

200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and

- While superseded by the USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."[20]

(2) State

(a) Executive Order S-3-05, Executive Order B-30-15, and Executive Order B-55-18

Executive Order S-3-05, issued by Governor Schwarzenegger in June 2005, established GHG emissions targets for the state, as well as a process to ensure the targets are met. The order directed the Secretary for the California Environmental Protection Agency (CalEPA) to report every two years on the State's progress toward meeting the Governor's GHG emission reduction targets. The statewide GHG targets established by Executive Order S-3-05 are as follows:

- By 2010, reduce to 2000 emission levels;[21]
- By 2020, reduce to 1990 emission levels; and
- By 2050, reduce to 80 percent below 1990 levels.

Executive Order B-30-15, issued by Governor Brown in April 2015, established an additional statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. Reducing GHG emissions by 40 percent below 1990 levels in 2030 and by 80 percent below 1990 levels by 2050 (consistent with Executive Order S-3-05) aligns with

[20] *A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.*

[21] *The 2010 target to reduce GHG emissions to 2000 levels was not met. Source: Rubin, Thomas A., Does California Really Need Major Land Use and Transportation Changes to Meet Greenhouse Gas Emissions Targets?, July 3, 2013.*

scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius.[22]

The State Legislature adopted equivalent 2020 and 2030 statewide targets in the California Global Warming Solutions Act of 2006 (also known as Assembly Bill [AB] 32) and Senate Bill 32, respectively, both of which are discussed below. However, the Legislature has not yet adopted a target for the 2050 horizon year.

As a result of Executive Order S-3-05, the California Climate Action Team (CAT), led by the Secretary of CalEPA, was formed. The CAT is made up of representatives from a number of state agencies and was formed to implement global warming emission reduction programs and to report on the progress made toward meeting statewide targets established under Executive Order S-3-05. The CAT reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in Executive Order S-3-05.[23]

The CAT stated that smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. "Intelligent transportation systems" refers to the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and the movement of people, goods, and services.[24]

Executive Order B-55-18, issued by Governor Brown in September 2018, establishes a new statewide goal to achieve carbon neutrality as soon as possible, but no later than 2045, and achieve and maintain net negative emissions thereafter. Based on this executive order, the California Air Resources Board (CARB) would work with relevant state agencies to develop a framework for implementation and accounting that tracks progress towards this goal as well as ensuring future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

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[22] *CARB, Frequently Asked Questions about Executive Order B-30-15, 2030 Carbon Target and Adaptation FAQs, April 29, 2015.*

[23] *CalEPA, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.*

[24] *CalEPA, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, p. 58.*

(b) Assembly Bill 32 (California Global Warming Solutions Act of 2006) and Senate Bill 32

The California Global Warming Solutions Act of 2006 (also known as AB 32) commits the State to achieving the following:

- By 2010, reduce to 2000 GHG emission levels;[25] and
- By 2020, reduce to 1990 levels.

To achieve these goals, which are consistent with the California CAT GHG targets for 2010 and 2020, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources consistent with the CAT strategies, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. In order to achieve the reduction targets, AB 32 requires CARB to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.[26]

Senate Bill (SB) 32, signed September 8, 2016, updates AB 32 (the Global Warming Solutions Act) to include an emissions reduction goal for the year 2030. Specifically, SB 32 requires CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 levels by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

(c) Climate Change Scoping Plan

In 2008, CARB approved a *Climate Change Scoping Plan* (referred to herein as the 2008 Climate Change Scoping Plan), as required by AB 32.[27] Subsequently, CARB approved updates to the 2008 Climate Change Scoping Plan in 2014 (First Update) and

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[25] *The 2010 target to reduce GHG emissions to 2000 levels was not met. Source: Rubin, Thomas A., Does California Really Need Major Land Use and Transportation Changes to Meet Greenhouse Gas Emissions Targets?, July 3, 2013.*

[26] *CARB's list of discrete early action measures that could be adopted and implemented before January 1, 2010, was approved on June 21, 2007. The three adopted discrete early action measures are: (1) a low-carbon fuel standard, which reduces carbon intensity in fuels statewide; (2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and (3) increased methane capture from landfills, which includes requiring the use of state-of-the-art capture technologies.*

[27] *Climate Change Proposed Scoping Plan was approved by CARB on December 11, 2008.*

2017 (2017 Update), with the 2017 Update considering SB 32 (adopted in 2016) in addition to AB 32.

The *2008 Climate Change Scoping Plan* proposed a "comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health."[28] The 2008 Climate Change Scoping Plan identified a range of GHG reduction actions which included direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms, such as a cap-and-trade system, and an AB 32 implementation fee to fund the program.

The 2008 Climate Change Scoping Plan called for a "coordinated set of solutions" to address all major categories of GHG emissions. Transportation emissions were addressed through a combination of higher standards for vehicle fuel economy, implementation of the Low Carbon Fuel Standard (LCFS), and greater consideration to reducing trip length and generation through land use planning and transit-oriented development. Buildings, land use, and industrial operations were encouraged and, sometimes, required to use energy more efficiently. Utility energy providers were required to include more renewable energy sources through implementation of the Renewables Portfolio Standard.[29] Additionally, the 2008 Climate Change Scoping Plan emphasized opportunities for households and businesses to save energy and money through increasing energy efficiency. It indicated that substantial savings of electricity and natural gas would be accomplished through "improving energy efficiency by 25 percent."

The *2008 Climate Change Scoping Plan* identified a number of specific issues relevant to the Project, including:

- The potential of using the green building framework as a mechanism, which could enable GHG emissions reductions in other sectors (i.e., electricity, natural gas), noting that:

> *A Green Building strategy will produce greenhouse gas savings through buildings that exceed minimum energy efficiency standards, decrease consumption of potable water, reduce solid waste during construction and operation, and incorporate sustainable materials. Combined, these measures can also*

[28] *CARB, Climate Change Scoping Plan: A Framework for Change, December 2008.*

[29] *For a discussion of Renewables Portfolio Standard, refer to subsection 2.c.(2)(f)(i), California Renewables Portfolio Standard, on page IV.D-20.*

contribute to healthy indoor air quality, protect human health, and minimize impacts to the environment.

- The importance of supporting the Department of Water Resources' work to implement the Governor's objective to reduce per capita water use by 20 percent by 2020. Specific measures to achieve this goal include water use efficiency, water recycling, and reuse of urban runoff. The *2008 Climate Change Scoping Plan* noted that water use requires significant amounts of energy, including approximately one-fifth of statewide electricity.

- Encouraging local governments to set quantifiable emission reduction targets for their jurisdictions and use their influence and authority to encourage reductions in emissions caused by energy use, waste and recycling, water and wastewater systems, transportation, and community design.

Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the scope of the reductions California had to make to return to the 1990 emissions level by 2020 as required by AB 32. CARB originally defined the "business-as-usual" or BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the *2008 Climate Change Scoping Plan*. For example, in further explaining CARB's BAU methodology, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards. In the *2008 Climate Change Scoping Plan*, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations).[30]

Subsequent to adoption of the *2008 Climate Change Scoping Plan*, a lawsuit was filed challenging CARB's approval of the *Climate Change Scoping Plan Functional Equivalent Document* (*FED to the Climate Change Scoping Plan*). On May 20, 2011 (Case No. CPF-09-509562), the Court found that the environmental analysis of the alternatives in the *FED to the Climate Change Scoping Plan* was not sufficient under the California Environmental Quality Act (CEQA). CARB staff prepared a revised and expanded environmental analysis, and the *Supplemental FED to the Climate Change Scoping Plan* was approved on August 24, 2011 (*Supplemental FED*). The *Supplemental FED* indicated that there is the potential for adverse environmental impacts associated with implementation of the various GHG emission reduction measures recommended in the *2008 Climate Change Scoping Plan*.

[30] *CARB, Climate Change Scoping Plan: A Framework for Change, December 2008, p. 12.*

As part of the *Supplemental FED*, CARB updated the projected 2020 BAU emissions inventory based on then-current economic forecasts (i.e., as influenced by the economic downturn) and emission reduction measures already in place, replacing its prior 2020 BAU emissions inventory. CARB staff derived the updated emissions estimates by projecting emissions growth, by sector, from the state's average emissions from 2006 through 2008. Specific emission reduction measures included were the million-solar-roofs program, the AB 1493 (Pavley I) motor vehicle GHG emission standards, and the LCFS.[31] In addition, CARB also factored into the 2020 BAU inventory emissions reductions associated with a 33-percent Renewable Portfolio Standard (RPS) for electricity generation. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from BAU conditions. When the 2020 emissions level projection also was updated to account for newly implemented regulatory measures discussed above, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.[32,33]

In 2014, CARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework (*First Update).[34] The stated purpose of the First Update was to "highlight… California's success to date in reducing its GHG emissions and lay… the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050."[35] The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32 and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the State realizes the expected benefits of existing policy goals.[36]

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[31] *Pavley I are the first GHG standards in the nation for passenger vehicles and took effect for model years starting in 2009 to 2016. Pavley I could potentially result in 27.7 million metric tons CO_2e reduction in 2020. Pavley II would cover model years 2017 to 2025 and potentially result in an additional reduction of 4.1 million metric tons CO_2e.*

[32] *CARB, Supplement to the AB 32 Scoping Plan FED, Table 1.2-2.*

[33] *The emissions and reductions estimates found in the Supplemental FED to the Climate Change Scoping Plan fully replace the estimates published in the 2008 Climate Change Scoping Plan. See CARB, Resolution 11-27 (Aug. 24, 2011) (setting aside approval of 2008 Climate Change Scoping Plan and associated emissions forecasts, and approving the Supplemental FED). The estimates in the 2008 document are 596 million metric tons CO_2e under 2020 BAU and a required reduction of 169 million metric tons CO_2e (28.4 percent).*

[34] *Health & Safety Code §38561(h) requires CARB to update the Scoping Plan every five years.*

[35] *CARB, 2014 Update, May 2014, p. 4.*

[36] *CARB, 2014 Update, May 2014, p. 34.*

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the State's economy to evaluate and describe the larger transformative actions that will be needed to meet the State's more expansive emission reduction needs by 2050."[37] Those six areas were: (1) energy; (2) transportation (vehicles/ equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6) natural and working lands. The First Update identified key recommended actions for each sector that would facilitate achievement of the 2050 reduction target.

Based on CARB's research efforts, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050."[38] Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

The First Update discussed new residential and commercial building energy efficiency improvements, specifically identifying progress towards zero net energy buildings as an element of meeting mid-term and long-term GHG reduction goals. The First Update expressed CARB's commitment to working with the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) to facilitate further achievements in building energy efficiency.

In January 2018, CARB adopted the *2017 Climate Change Scoping Plan Update: The Strategy for Achieving California's 2030 Greenhouse Gas Target* (2017 Update). The 2017 Update builds upon the framework established by the *2008 Climate Change Scoping Plan* and the First Update while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health. The 2017 Update includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constrains and reduces emissions at covered sources.[39] Implementation of mobile source strategies (cleaner technology and fuels) include the following:[40]

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[37] *CARB, 2014 Update, May 2014, p. 6.*

[38] *CARB, 2014 Update, May 2014, p. 32.*

[39] *CARB, 2017 Update, November 2017, p. 7.*

[40] *CARB, 2017 Update, November 2017, p. 25.*

- At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025.

- At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.

- Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Cars regulations.

- Medium- and heavy-duty GHG Phase 2.

- Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_X standard.

- Last Mile Delivery: New regulation that would result in the use of low NO_X or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for Class 3–7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.

- Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."

(d) Assembly Bill 197

AB 197, signed September 8, 2016, is a bill linked to SB 32, which prioritizes efforts to cut GHG emissions in low-income or minority communities. AB 197 requires CARB to make available, and update at least annually, on its website, the emissions of GHGs, criteria pollutants, and toxic air contaminants for each facility that reports to CARB and air districts. In addition, AB 197 adds two Members of the Legislature to the CARB board as ex officio, non-voting members and also creates the Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the Legislature and the houses of the Legislature concerning the State's programs, policies, and investments related to climate change.

(e) Cap-and-Trade Program

The *2008 Climate Change Scoping Plan* identifies a Cap-and-Trade Program as one of the strategies for California to reduce GHG emissions. Under Cap-and-Trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap are able to trade permits to emit GHGs within the overall limit. According to CARB, a Cap-and-Trade Program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by the year 2020.[41] CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32 and the State Legislature extended the Cap-and-Trade Program through 2030 with the adoption of Assembly Bill 398.

The Cap-and-Trade Program is designed to reduce GHG emissions from major sources, such as refineries and power plants, (deemed "covered entities"). "Covered entities" subject to the Cap-and-Trade Program are sources that emit more than 25,000 metric tons CO_2e ($MTCO_2e$) per year. Triggering of the 25,000 $MTCO_2e$ per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule or MRR).

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or in part (if eligible) and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender an allowance for each metric ton CO_2e of GHG they emit.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 and 2030 statewide emission limits will not be exceeded. An inherent feature of the Cap-and-Trade Program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on a cumulative basis. As summarized by CARB in the First Update:

> *The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced.*

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[41] *With continuation of the Cap-and-Trade Program, the State can achieve a 40-percent reduction target by 2030.*

For example, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a commensurate reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative.

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its GHG emissions reduction mandates:

> *The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap.[42] […]*
>
> *[T]he Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions.[43]*

Overall, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory framework adopted by CARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the state's emissions forecasts and the effectiveness of direct regulatory measures.

As of January 1, 2015, the Cap-and-Trade Program covers approximately 85 percent of California's GHG emissions.[44]

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[42] *CARB, 2014 Update, May 2014, p. 88.*

[43] *CARB, 2014 Update, May 2014, pp. 86–87.*

The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Cap-and-Trade Program's first compliance period.[45] Furthermore, the Cap-and-Trade Program also covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). Accordingly, as with stationary source GHG emissions and GHG emissions attributable to electricity use, virtually all, if not all, of GHG emissions associated with vehicle miles traveled (VMT) from CEQA projects related to fuel suppliers are covered by the Cap-and-Trade Program.

Assembly Bill 398 (AB 398) was enacted in 2017 to extend and clarify the role of the State's Cap-and-Trade Program through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade Program to establish updated protocols and allocation of proceeds to reduce GHG emissions.

(f) Energy-Related Sources

(i) California Renewables Portfolio Standard

The California Renewables Portfolio Standard (RPS) program (2002, SB 1078) required that 20 percent of the available energy supplies are from renewable energy sources by 2017. In 2006, SB 107 accelerated the 20 percent mandate to 2010. These mandates apply directly to investor-owned utilities. On April 12, 2011, California Governor Jerry Brown signed into law Senate Bill 2X (SB 2X), which modified California's RPS program to require that both public and investor-owned utilities in California receive at least 33 percent of their electricity from renewable sources by the year 2020. SB 2X also requires regulated sellers of electricity to meet an interim milestone of procuring 25 percent of their energy supply from certified renewable resources by 2016

[44] *Center for Climate and Energy Solutions, California Cap-and-Trade, www.c2es.org/us-states-regions/key-legislation/california-cap-trade, accessed October 20, 2020.*

[45] *While the Cap-and-Trade Program technically covered fuel suppliers as early as 2012, they did not have a compliance obligation (i.e., they were not fully regulated) until 2015.*

In 2019, LADWP indicated that 32 percent of its electricity came from renewable resources in Year 2018.[46] Therefore, under SB 2X, LADWP is required to increase its electricity from renewable resources by an additional one percent to comply with the RPS of 33 percent by 2020.

(ii) Senate Bill 350 (Clean Energy and Pollution Reduction Act of 2015)

Senate Bill (SB) 350, the Clean Energy and Pollution Reduction Act of 2015 was enacted on October 7, 2015. The objectives of SB 350 are: (1) to increase from 33 percent to 50 percent, the procurement of our electricity from renewable sources by 2030; and (2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.[47]

(iii) Senate Bill 100 (100 Percent Clean Energy Act of 2018)

Senate Bill (SB) 100, the 100 Percent Clean Energy Act of 2018 was enacted on September 10, 2018. SB 100 updates the goals of California's RPS and SB 350, as discussed above, to the following: achieve 50-percent renewable resources target by December 31, 2026, and achieve a 60-percent target by December 31, 2030. SB 100 also requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.[48]

(iv) Senate Bill 1368

Senate Bill (SB) 1368, signed September 29, 2006, is a companion bill to AB 32 that requires the CPUC and the CEC to establish GHG emission performance standards for the generation of electricity. These standards also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per MWh. Furthermore, on May 23, 2007,

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[46] *California Energy Commission, 2018 Power Content Label—Los Angeles Department of Water and Power..*

[47] *Senate Bill 350 (2015–2016 Reg, Session) Stats 2015, ch. 547.*

[48] *Senate Bill 100 (2017–2018 Reg. Session) Stats 2018, ch. 312.*

the CEC adopted regulations that establish and implement an identical Emissions Performance Standard of 1,100 pounds of CO_2 per MWh (see CEC Order No. 07-523-7).

(g) Mobile Sources

(i) Assembly Bill 1493 (Pavley I)

AB 1493, passed in 2002, requires the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the state. CARB originally approved regulations to reduce GHGs from passenger vehicles in September 2004, with the regulations to take effect in 2009. On September 24, 2009, CARB adopted amendments to these "Pavley" regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016.[49] Although setting emission standards on automobiles is solely the responsibility of the USEPA, the federal CAA allows California to set state-specific emission standards on automobiles if the State first obtains a waiver from the USEPA. The USEPA granted California that waiver on July 1, 2009. A comparison between the AB 1493 standards and the Federal CAFE standards was completed by CARB and the analysis determined that California emission standards are 16 percent more stringent through the 2016 model year and 18 percent more stringent for the 2020 model year.[50] CARB is also committed to further strengthening these standards beginning with 2020 model year vehicles to obtain a 45-percent GHG reduction in comparison to the 2009 model year.

In 2018, the USEPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE) which would roll back fuel economy standards and revoke California's waiver. Under this proposed rule, the EPA would amend certain average fuel economy and GHG standards for passenger cars covering model years 2021 through 2026. On March 31, 2020, USEPA and NHTSA finalized the SAFE Vehicles Rule, setting fuel economy and carbon dioxide standards that increase 1.5 percent in stringency each year from model years 2021 through 2026.[51]

On September 27, 2019, the USEPA withdrew the waiver it had previously provided to California for the State's GHG and ZEV programs under Section 209 of the Clean Air

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[49] *CARB, Clean Car Standards—Pavley, Assembly Bill 1493, www.arb.ca.gov/cc/ccms/ccms.htm, Accessed October 20, 2020.*

[50] *CARB, "Comparison of Greenhouse Gas Reductions for all Fifty United States under CAFE Standards and ARB Regulations Adopted Pursuant to AB 1493," January 23, 2008.*

[51] *Federal Register, Final Rule, The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks.*

Act.[52] The withdrawal of the waiver became effective November 26, 2019. In response, several states including California have filed a lawsuit challenging the withdrawal of the EPA waiver.[53] As of December 2020, the lawsuit is still ongoing.

(ii) Executive Order S-1-07 (California Low Carbon Fuel Standard)

Executive Order S-1-07, the LCFS (issued on January 18, 2007), requires a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. Regulatory proceedings and implementation of the LCFS were directed to CARB. CARB released a draft version of the LCFS in October 2008. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the LCFS became effective on the same day.

California's 2017 Climate Change Scoping Plan (2017 Update) has identified LCFS as a regulatory measure to reduce GHG emission to meet the 2030 emissions target. In calculating statewide emissions and targets, the 2017 Update has assumed extending the LCFS to an 18-percent reduction in carbon intensity beyond 2020. On September 27, 2018, CARB approved a rulemaking package that amended the LCFS to relax the 2020 carbon intensity reduction from 10 percent to 7.5 percent and to require a carbon intensity reduction of 20 percent by 2030.

(iii) Advanced Clean Cars Regulations

In 2012, CARB approved the Advanced Clean Cars program, an emissions-control program for model years 2015–2025.[54] The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.[55] In

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[52] *84 FR 51310*

[53] *United States District Court for the District Court of Columbia, State of California vs. Chao, Case 1:19-cv-02826, 2019.*

[54] *CARB, California's Advanced Clean Cars Program, www.arb.ca.gov/msprog/acc/acc.htm, accessed October 20, 2020.*

[55] *CARB, California's Advanced Clean Cars Program, www.arb.ca.gov/msprog/acc/acc.htm, accessed October 20, 2020.*

March 2017, CARB voted unanimously to continue with the vehicle GHG emission standards and the ZEV program for cars and light trucks sold in California through 2025.[56]

(iv) Senate Bill 375

Acknowledging the relationship between land use planning and transportation sector GHG emissions, SB 375 was signed by the Governor on September 30, 2008. This legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32. Reductions in GHG emissions would be achieved by, for example, locating employment opportunities close to transit. Under SB 375, each Metropolitan Planning Organization (MPO) is required to adopt a Sustainable Community Strategy (SCS) to encourage compact development that reduces passenger VMT and trips so that the region will meet a target, created by CARB, for reducing GHG emissions. If the SCS is unable to achieve the regional GHG emissions reduction targets, then the MPO is required to prepare an alternative planning strategy that shows how the GHG emissions reduction target could be achieved through alternative development patterns, infrastructure, and/or transportation measures. Under SB 375, CARB is required to update regional GHG emissions targets every 8 years with the last update formally adopted in March 2018. As part of the 2018 updates, the CARB has adopted a passenger vehicle related GHG reduction of 19 percent for 2035 for the SCAG region, which is more stringent than the previous reduction target of 13 percent for 2035.[57,58]

(v) Senate Bill 743

Governor Brown signed Senate Bill (SB) 743 in 2013, which creates a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 requires the Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to level of service (LOS) methodology for evaluating transportation impacts. Particularly within areas served by transit, the required alternative criteria must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." Based on OPR's extensive review of the applicable research, and in light of an assessment by the California Air Resources Board quantifying the need for VMT reduction in order to meet the State's

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[56] *CARB, News Release: CARB finds vehicle standards are achievable and cost-effective, www.arb.ca.gov/newsrel/newsrelease.php?id=908, accessed October 20, 2020.*

[57] *CARB, SB 375 Regional Greenhouse Gas Emissions Reduction Targets (2018).*

[58] *As the CARB targets were adopted after SCAG's most recently adopted SCS, it is expected that the updated targets will be incorporated into SCAG's next SCS.*

long-term climate goals, OPR recommended that "achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals."[59]

(vi) Senate Bill 97 (SB 97)

On June 19, 2008, OPR released a technical advisory on addressing climate change. This guidance document outlines suggested components to CEQA disclosure, including quantification of GHG emissions from a project's construction and operation; determination of significance of the project's impact to climate change; and if the project is found to be significant, the identification of suitable alternatives and mitigation measures.

SB 97, passed in August 2007, is designed to work in conjunction with CEQA and AB 32. SB 97 requires OPR to prepare and develop guidelines for the mitigation of GHG emissions or the effects thereof, including, but not limited to, the effects associated with transportation and energy consumption. The Draft Guidelines Amendments for Greenhouse Gas Emissions ("Guidelines Amendments") were adopted on December 30, 2009, and address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment.

However, neither a threshold of significance nor any specific mitigation measures are included or provided in the Guidelines Amendments.[60] The Guidelines Amendments require a lead agency to make a good-faith effort, based on the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The Guidelines Amendments give discretion to the lead agency whether to: (1) use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. Furthermore, the Guidelines Amendments identify three factors that should be considered in the evaluation of the significance of GHG emissions:

1. The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;

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[59] *Governor's Office of Planning and Research, Technical Advisory—On Evaluating Transportation Impacts in CEQA, p. 12.*

[60] *See 14 Cal. Code Regs. §§ 15064.7 (generally giving discretion to lead agencies to develop and publish thresholds of significance for use in the determination of the significance of environmental effects), 15064.4 (giving discretion to lead agencies to determine the significance of impacts from GHGs).*

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[61]

On December 28, 2018, OPR adopted amendments to the CEQA Guidelines to clarify several points such as the cumulative nature of greenhouse gas emissions, modeling methodology, and significance evaluation. These amendments included provisions contained in the 2008 OPR technical advisory which focused on the cumulative nature of greenhouse gas emissions and the effects on climate change. The administrative record for the Guidelines Amendments also clarifies "that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of California Environmental Quality Act's requirements for cumulative impact analysis."[62]

The California Natural Resources Agency is required to periodically update the Guidelines Amendments to incorporate new information or criteria established by CARB pursuant to AB 32. SB 97 applies retroactively to any environmental impact report (EIR), negative declaration, mitigated negative declaration, or other document required by CEQA, which has not been finalized.

(h) Building Standards

(i) California Appliance Efficiency Regulations (Title 20, Sections 1601 through 1608)

The 2014 Appliance Efficiency Regulations, adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

(ii) California Building Energy Efficiency Standards (Title 24, Part 6)

California's Energy Efficiency Standards for Residential and Nonresidential Buildings, located at Title 24, Part 6 of the California Code of Regulations and commonly referred to as "Title 24," were established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 requires the design of building shells and

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[61] *14 Cal. Code Regs. § 15064.4(b).*

[62] *Letter from Cynthia Bryant, Director of the Governor's Office of Planning and Research to Mike Chrisman, California Secretary for Natural Resources, dated April 13, 2009.*

building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.[63] On May 9, 2018, the CEC adopted the 2019 Title 24 Standards, which will go into effect on January 1, 2020. [64] The 2019 standards continue to improve upon the previous (2016) Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings.[65] The 2019 Title 24 Standards represent "challenging but achievable design and construction practices" that represent "a major step towards meeting the Zero Net Energy (ZNE) goal."[66] Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. This will reduce greenhouse gas emissions by 700,000 metric tons over three years, equivalent to taking 115,000 fossil fuel cars off the road. Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades.[67] Compliance with Title 24 is enforced through the building permit process.

(iii) California Green Building Standards (CALGreen Code)

The most recent update to the California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the 2019 CALGreen Code, is effective January 1, 2020. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Most of the mandatory measure changes in the 2019 CALGreen Code relative to the previous 2016 CALGreen Code relate to definitions and to the clarification or addition of referenced manuals, handbooks, and standards. For example, several definitions related to energy that were added or revised affect electric vehicle chargers and air filtration systems. For new multi-family dwelling units, the residential mandatory measures were revised to provide additional electric vehicle charging space requirements, including quantity, location, size, single EV space, multiple EV spaces, and identification.[68] For nonresidential mandatory measures, the table (Table 5.106.5.3.3) identifying the number of required EV charging spaces has been

[63] *CEC, 2019 Building Energy Efficiency Standards.*

[64] *CEC, 2019 Building Energy Efficiency Standards.*

[65] *CEC, 2019 Building Energy Efficiency Standards.*

[66] *CEC, 2019 Residential Compliance Manual for the 2019 Building Energy Efficiency Standards.*

[67] *CEC, 2019 Building Energy Efficiency Standards, Fact Sheet.*

[68] *California Building Standards Commission, 2019 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 4—Residential Mandatory Measures, effective January 1, 2020.*

revised in its entirety.[69] Compliance with the 2019 CALGreen Code is enforced through the building permit process.

(3) Regional

(a) South Coast Air Quality Management District

The Southern California Air Quality Management District (SCAQMD) adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan, which is a regional blueprint for achieving air quality standards and healthful air. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.[70] Within its October 2008 document, the SCAQMD proposed the use of a percent emission reduction target to determine significance for residential/ commercial projects that emit greater than 3,000 $MTCO_2e$ per year. Under this proposal, residential/commercial projects that emit fewer than 3,000 $MTCO_2e$ per year would be assumed to have a less-than-significant impact on climate change. However, this proposed residential/commercial threshold was not formally adopted. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG

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[69] *California Building Standards Commission, 2016 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 5—Nonresidential Mandatory Measures, effective January 1, 2017.*

[70] *SCAQMD, Draft Guidance Document—Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008, Attachment E.*

significance threshold of 10,000 $MTCO_2e$ per year for stationary source/industrial projects where the SCAQMD is the lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects).

(b) Southern California Association of Governments

To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) on April 7, 2016.[71,72] The 2016 RTP/SCS reaffirms the land use policies that were incorporated into the prior 2012–2035 RTP/SCS. These foundational policies, which guided the development of the 2016 RTP/SCS's strategies for land use, include the following:

- Identify regional strategic areas for infill and investment;
- Structure the plan on a three-tiered system of centers development;[73]
- Develop "Complete Communities";
- Develop nodes on a corridor;
- Plan for additional housing and jobs near transit;
- Plan for changing demand in types of housing;
- Continue to protect stable, existing single-family areas;
- Ensure adequate access to open space and preservation of habitat; and
- Incorporate local input and feedback on future growth.

The 2016 RTP/SCS recognizes that transportation investments and future land use patterns are inextricably linked, and continued recognition of this close relationship will help the region make choices that sustain existing resources and expand efficiency, mobility,

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[71] *SCAG, 2016 RTP/SCS.*

[72] *SCAG, Executive Order G-16-066, SCAG 2016 SCS ARB Acceptance of GHG Quantification Determination, June 2016.*

[73] *Complete language: "Identify strategic centers based on a three-tiered system of existing, planned and potential relative to transportation infrastructure. This strategy more effectively integrates land use planning and transportation investment." A more detailed description of these strategies and policies can be found on pp. 90–92 of the SCAG 2008 Regional Transportation Plan, adopted in May 2008.*

and accessibility for people across the region. In particular, the 2016 RTP/SCS draws a closer connection between where people live and work, and it offers a blueprint for how Southern California can grow more sustainably. The 2016 RTP/SCS also includes strategies focused on compact infill development and economic growth by building the infrastructure the region needs to promote the smooth flow of goods and easier access to jobs, services, educational facilities, healthcare and more.

The 2016 RTP/SCS states that the SCAG region is home to about 18.3 million people in 2012 and currently includes approximately 5.9 million homes and 7.4 million jobs.[74] By 2040, the integrated growth forecast of the 2016 RTP/SCS projects that these figures will increase by 3.8 million people, with nearly 1.5 million more homes and 2.4 million more jobs. High Quality Transit Areas[75] (HQTAs) will account for 3 percent of regional total land but are projected to accommodate 46 percent and 55 percent of future household and employment growth respectively between 2012 and 2040. The 2016 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region's HQTAs. HQTAs are a cornerstone of land use planning best practice in the SCAG region because they concentrate roadway repair investments, leverage transit and active transportation investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and housing affordability.

The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy 2020–2045 RTP/SCS) was adopted by SCAG on September 3, 2020. It was determined by the California Air Resources Board (CARB) on October 30, 2020, that the 2020–2045 RTP/SCS would meet the region's GHG reduction target. The goals and policies of the 2020–2045 RTP/SCS are similar to, and consistent with, those of the 2016–2040 RTP/SCS. For purposes of this analysis, both SCAG's 2016-2040 RTP/SCS and 2020-2045 RTP/SCS are discussed.

The 2020–2045 RTP/SCS vision for the region incorporates a range of best practices for increasing transportation choices, reducing dependence on personal automobiles, further improving air quality and encouraging growth in walkable, mixed-use communities with ready access to transit infrastructure and employment. More and varied housing types and employment opportunities would be located in and near job centers,

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[74] *The SCAG 2016–2040 RTP/SCS is based on year 2012 demographic data with growth forecasts developed for 2020, 2035, and 2040.*

[75] *Defined by the 2016–2040 RTP/SCS as generally walkable transit villages or corridors that are within 0.5-mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours..*

transit stations and walkable neighborhoods where goods and services are easily accessible via shorter trips.

The 2020–2045 RTP/SCS states that the SCAG region was home to about 18.8 million people in 2016 and currently includes approximately 6.0 million homes and 8.4 million jobs.[76] By 2045, the integrated growth forecast of the 2020–-2045 RTP/SCS projects that these figures will increase by 3.7 million people, with nearly 1.6 million more homes and 1.6 million more jobs. Transit Priority Areas[77] (TPAs) will account for less than one percent of regional total land but are projected to accommodate 30 percent of future household growth between 2016 and 2045.[78] The 2020–2045 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region's TPAs.

The 2020–2045 RTP/SCS is expected to reduce per capita transportation emissions by 19 percent by 2035, which is consistent with SB 375 compliance with respect to meeting the State's GHG emission reduction goals.[79] Due to fuel economy and efficiency improvements, GHG emission rates of model year 2017 vehicles have decreased by 15 to 20 percent when compared to model year 2008 and earlier vehicles. However, for purposes of SB 375 emissions reduction targets, the fuel economy improvements have been largely excluded from the reduction calculation.[80] The SB 375 target focuses on the amount of vehicle travel per capita. As discussed above, OPR recommended that achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals (i.e., SB 375 goal). The reductions generated by fuel economy improvements are already included as part of the State's GHG emissions reduction program and are not double-counted in the SB 375 target calculation.[81]

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[76] *2020–2045 RTP/SCS population growth forecast methodology includes data for years 2010, 2010, 2016, and 2045.*

[77] *Defined by the 2020–2045 RTP/SCS as generally walkable transit villages or corridors that are within 0.5-mile of a major transit stop (rail or bus rapid transit station) or transit corridor with 15-minute or less service frequency during peak commute hours*

[78] *SCAG, Final 2020–2045 RTP/SCS, Making Connections, p. 51, May 7, 2020.*

[79] *SCAG, Final 2020–2045 RTP/SCS, Making Connections, p. 5, May 7, 2020.*

[80] *California Air Resources Board, Staff Report Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets, p B-32 June 2017.*

[81] *California Air Resources Board. SB 375 Regional Greenhouse Gas Emissions Reduction Targets. Appendix A.*

(4) Local

(a) City of Los Angeles Green New Deal/Sustainable City pLAn

In 2015, Mayor Eric Garcetti issued the Sustainable City pLAn, a mayoral directive that includes both short-term and long-term aspirations through the year 2035 in various topic areas, including: water, solar power, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, and air quality, among others.

In 2019, the first four-year update to the 2015 Sustainable City pLAn was released. This updated document, known as L.A.'s Green New Deal, expands upon the City's vision for a sustainable future and provides accelerated targets and new goals.[82] L.A.'s Green New Deal's specific targets, include ensuring 57 percent of new housing units are built within 1,500 feet of transit by 2025 and 75 percent by 2035; reducing VMT per capita by at least 13 percent by 2025, 39 percent by 2035, and 45 percent by 2050; increasing the percentage of all trips made by walking, biking, micro-mobility/matched rides or transit to at least 35 percent by 2025 and 50 percent by 2035; supplying 100 percent renewable energy by 2045; installing 10,000 publicly available EV chargers by 2022 and 28,000 by 2028; diverting 100 percent of waste by 2050; and recycling 100 percent of wastewater by 2035.[83]

(b) City of Los Angeles Green Building Code

To achieve the goals outlined in its policy documents addressing climate change, in April 2008, the City adopted the Green Building Program Ordinance to address the impacts of new development. In 2011, 2014, 2016, and 2019, Chapter IX, Article 9, of the Los Angeles Municipal Code (LAMC), referred to as the Los Angeles Green Building Code, was amended to incorporate various provisions of the CALGreen Code. The Los Angeles Green Building Code includes mandatory requirements and elective measures for three categories of buildings: (1) low-rise residential buildings; (2) non-residential and high-rise residential buildings; and (3) additions and alterations to residential and non-residential buildings. Measures included in the Los Angeles Green Building Code that would serve to reduce GHG emissions include requirements for water reduction and water conserving plumbing fixtures and fittings, requirements for bicycle parking spaces, and electric vehicle charging, among others.

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[82] *City of Los Angeles, L.A.'s Green New Deal, Sustainable City pLAn, 2019.*

[83] *City of Los Angeles, L.A.'s Green New Deal, Sustainable City pLAn, 2019 Targets, https://plan.lamayor.org/targets/targets_plan.html, accessed October 20, 2020.*

(c) City of Los Angeles General Plan

The City of Los Angeles does not have a General Plan Element specific to global warming and GHG emissions. However, the following five goals from the Air Quality Element of the City of Los Angeles General Plan would also serve to reduce GHG emissions:

- Less reliance on single-occupancy vehicles with fewer commute and non-work trips;
- Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;
- Minimal impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation and air quality;
- Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels and the implementation of conservation measures including passive measures, such as site orientation and tree planting; and
- Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

(d) Transportation Assessment Guidelines

The City of Los Angeles Department of Transportation (LADOT) has developed the Transportation Assessment Guidelines (TAG) [July 2019, Updated July 2020] that establish criteria for project review objectives and requirements, and provide instructions and set standards for preparation of transportation assessments in the City of Los Angeles. The most recent TAG conforms to the requirements of SB 743, which directs lead agencies to revise transportation assessment guidelines to include a transportation performance metric that promotes the reduction of greenhouse gas emissions, the development of multimodal networks, and access to diverse land uses. In particular, the TAG sets forth VMT thresholds that conform to the mandates and requirements of AB 32, SB 375, and SB 743.

d. Existing Conditions

(1) Existing Statewide GHG Emissions

GHG emissions are the result of both natural and human-influenced activities. Regarding human-influenced activities, motor vehicle travel, consumption of fossil fuels for

power generation, industrial processes, heating and cooling, landfills, agriculture, and wildfires are the primary sources of GHG emissions. Without human intervention, Earth maintains an approximate balance between the emission of GHGs into the atmosphere and the storage of GHGs in oceans and terrestrial ecosystems. Events and activities, such as the industrial revolution and the increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.), have contributed to the rapid increase in atmospheric levels of GHGs over the last 150 years. As reported by the CEC, California contributes 1 percent of global[84] and 6.4 percent of national GHG emissions.[85] . Approximately 82 percent of GHGs in California consist of CO_2 produced from fossil fuel combustion.[86] The current California GHG inventory compiles statewide anthropogenic GHG emissions and carbon sinks/storage from years 2000 to 2017.[87] It includes estimates for CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. The GHG inventory for California for years 2011 through 2017 is presented in Table IV.D-3 on page IV.D-35.

As shown in Table IV.D-3, the GHG inventory for California in 2017 was 424.10 million $MTCO_2e$. Based on data presented above, the statewide GHG inventory fell below 1990 levels for the first time in 2016, consistent with the goals of AB 32.[88]

(2) Existing Project Site Emissions

The Project Site is currently occupied by three existing multi-family residential developments totaling 43,939 square feet, including 112 residential units. These three multi-family residential developments include a two-story, 13-unit building located at 10341–10381 Bellwood Avenue; seven, two-story buildings with a total of 82 units located at 10328–10366 Bellwood Avenue; and six, one-story bungalow court buildings located at 10368–10384 Bellwood Avenue with a total of 17 units.

Area source emissions are generated by maintenance equipment, landscape equipment, and use of products that contain solvents. Energy source emissions are associated with building electricity and natural gas usage at the Project Site. In addition,

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[84] *CEC, California Energy Commission—Tracking Progress, Greenhouse Gas Emission Reductions, page 2 last updated December 2018.*

[85] *CEC, Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004, CEC-600-2006-013, October 2006.*

[86] *CEC, California Energy Commission—Tracking Progress, Greenhouse Gas Emission Reductions, page 2 last updated December 2018.*

[87] *A carbon inventory identifies and quantifies sources and sinks of greenhouse gases. Sinks are defined as a natural or artificial reservoir that accumulates and stores some carbon-containing chemical compound for an indefinite period.*

[88] *California Air Resources Board Press Release, ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time, accessed October 20, 2020.*

Table IV.D-3
California GHG Inventory
(million metric tons CO_2e)

	2011	2012	2013	2014	2015	2016	2017
Transportation	**161.8**	**161.3**	**160.9**	**162.5**	**166.2**	**168.8**	**169.9**
On Road	0	0	0	0	0	0	0
Passenger Vehicles	111.4	111.8	111.5	112.2	116.3	119	119.9
Heavy Duty Trucks	36.65	35.93	35.55	35.83	35.19	35.61	35.81
Ships & Commercial Boats	3.52	3.43	3.42	3.49	3.42	3.24	3.32
Aviation (Intrastate)	3.73	3.75	3.93	3.9	4.22	4.44	4.68
Rail	2.64	2.47	2.4	2.63	2.42	2.17	1.83
Off Road	2.13	2.23	2.33	2.43	2.53	2.63	2.73
Unspecified	1.72	1.71	1.77	2.04	2.07	1.66	1.54
Percent of Total Emissions	*36%*	*36%*	*36%*	*37%*	*38%*	*40%*	*40%*
Electric Power	**87.97**	**95.52**	**89.4**	**88.46**	**83.82**	**68.59**	**62.39**
In-State Generation	41.1	51.02	49.42	51.68	49.88	42.28	38.45
Natural Gas	35.81	45.76	45.61	46.38	45.11	38.25	34.88
Other Fuels	4.03	4.44	2.91	4.4	3.65	2.54	2.61
Fugitive and Process Emissions	1.25	0.82	0.9	0.9	1.13	1.48	0.95
Imported Electricity	46.87	44.5	39.98	36.79	33.93	26.32	23.94
Unspecified Imports	15.52	17.48	11.82	13.44	11.21	9.68	8.84
Specified Imports	31.35	27.02	28.15	23.35	22.72	16.64	15.1
Percent of Total Emissions	*20%*	*21%*	*20%*	*20%*	*19%*	*16%*	*15%*
Commercial and Residential	**46.37**	**43.76**	**44.42**	**38.25**	**38.82**	**40.62**	**41.14**
Residential Fuel Use	30.51	28.21	29.02	23.75	24.17	25.27	26.00
Natural Gas	27.51	25.76	26.53	21.58	21.90	22.80	23.62
Other Fuels	2.13	1.58	1.62	1.28	1.39	1.58	1.49
Fugitive Emissions	0.87	0.87	0.88	0.88	0.89	0.89	0.89
Commercial Fuel Use	13.71	13.41	13.30	12.52	12.67	13.14	13.02
Natural Gas	11.33	11.25	11.28	10.40	10.50	10.90	11.06
Other Fuels	2.38	2.16	2.02	2.12	2.16	2.24	1.95
Commercial Cogeneration Heat Output	0.78	0.76	0.70	0.57	0.55	0.77	0.68
Other Commercial and Residential	1.37	1.38	1.40	1.41	1.42	1.43	1.44
Percent of Total Emissions	*10%*	*10%*	*10%*	*9%*	*9%*	*10%*	*10%*
Industrial	**90.17**	**91.08**	**93.69**	**94.02**	**91.48**	**89.49**	**89.4**
Refineries	30.12	29.88	29.22	29.4	28.21	29.61	29.89
General Fuel Use	18.78	18.91	19.31	19.88	19.23	19.23	19.07
Natural Gas	14.5	14.48	14.37	15.57	14.79	15.28	15.28
Other Fuels	4.28	4.43	4.94	4.31	4.45	3.96	3.78
Oil & Gas Extraction[a]	16.73	16.73	19.06	19.47	19.58	17.11	17.22
Fuel Use	14.91	14.87	16.94	17.18	17.22	14.84	14.94
Fugitive Emissions	1.82	1.86	2.12	2.29	2.36	2.27	2.28

Table IV.D-3 (Continued)
California GHG Inventory
(million metric tons CO_2e)

	2011	2012	2013	2014	2015	2016	2017
Cement Plants	5.37	6.92	7.21	7.66	7.47	7.6	7.66
Clinker Production	3.7	4.22	4.47	4.78	4.69	4.67	4.85
Fuel Use	1.67	2.7	2.74	2.88	2.77	2.93	2.81
Cogeneration Heat Output	11.15	10.81	10.99	9.64	8.98	7.99	7.79
Other Process Emissions	8.02	7.81	7.9	7.98	8.01	7.95	7.78
Percent of Total Emissions	*20%*	*20%*	*21%*	*21%*	*21%*	*21%*	*21%*
Recycling and Waste	**8.47**	**8.49**	**8.52**	**8.59**	**8.73**	**8.81**	**8.89**
Landfills[b]	8.19	8.20	8.22	8.28	8.40	8.47	8.54
Composting	0.27	0.29	0.30	0.31	0.33	0.34	0.35
Percent of Total Emissions	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*
High Global Warming Potential	**14.53**	**15.54**	**16.75**	**17.73**	**18.60**	**19.26**	**19.99**
Ozone Depleting Substance Substitutes	14.21	15.25	16.38	17.42	18.32	19.00	19.64
Electricity Grid SF6 Losses[c]	0.24	0.24	0.29	0.17	0.14	0.10	0.18
Semiconductor Manufacturing[b]	0.08	0.06	0.08	0.14	0.14	0.16	0.17
Percent of Total Emissions	*3%*	*3%*	*4%*	*4%*	*4%*	*5%*	*5%*
Agriculture[d]	**34.34**	**35.46**	**33.99**	**35.06**	**33.75**	**33.51**	**32.42**
Livestock	23.26	23.89	22.92	23.24	22.66	22.57	22.68
Enteric Fermentation (Digestive Process)	11.40	11.52	11.22	11.28	10.95	10.93	11.05
Manure Management	11.86	12.38	11.71	11.96	11.70	11.64	11.62
Crop Growing & Harvesting	7.42	7.70	7.36	7.30	6.70	6.96	6.63
Fertilizers	5.71	5.94	5.63	5.67	5.24	5.34	5.14
Soil Preparation and Disturbances	1.63	1.68	1.65	1.56	1.38	1.54	1.40
Crop Residue Burning	0.08	0.08	0.08	0.08	0.08	0.08	0.09
General Fuel Use	3.65	3.88	3.71	4.51	4.40	3.97	3.11
Diesel	2.52	2.47	2.53	3.39	3.66	3.21	2.40
Natural Gas	0.66	0.70	0.69	0.63	0.64	0.72	0.67
Gasoline	0.48	0.71	0.49	0.49	0.10	0.04	0.05
Other Fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent of Total Emissions	*8%*	*8%*	*8%*	*8%*	*8%*	*8%*	*8%*
Total Net Emissions	**443.6**	**451.2**	**447.7**	**444.7**	**441.4**	**427.0**	**424.1**

[a] *Reflects emissions from combustion of fuels plus fugitive emissions.*

[b] *These categories are listed in the Industrial sector of CARB's GHG Emission Inventory sectors.*

[c] *This category is listed in the Electric Power sector of CARB's GHG Emission Inventory sectors.*

[d] *Reflects use of updated USEPA models for determining emissions from livestock and fertilizers.*

Source: California GHG Inventory for 2000–2017—by Category as Defined in the 2008 Climate Change Scoping Plan million metric tons of CO_2e—(based upon IPCC Second Assessment Report's Global Warming Potentials).

mobile source emissions from the existing uses are generated by motor vehicle trips to and from the Project Site. Additionally, waste sources emissions are from solid waste generated at the Project Site and water source emissions are generated from water used on the Project Site. Table IV.D-4 below presents the GHG emissions associated with the existing land uses.

Table IV.D-4
Existing (2019) Project Site Annual GHG Emissions Summary

Scope	Metric Tons of Carbon Dioxide Equivalent[a] ($MTCO_2e$)
Area	25
Energy	313
Mobile	535
Solid Waste	6
Water/Wastewater Generation	63
Total Emissions	943

Numbers may not add up exactly due to rounding.

[a] *CO_2e was calculated using CalEEMod and the results are provided in Section 2.0 of the Operational (Baseline) CalEEMod output file within Appendix C of this Draft EIR.*

Source: Eyestone Environmental, 2021.

3. Project Impacts

a. Thresholds of Significance

(1) State CEQA Guidelines Appendix G

In accordance with Appendix G of the State CEQA Guidelines (CEQA Guidelines), the Project would have a significant impact related to GHG emissions if it would:

Threshold (a): Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment;

Threshold (b): Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Section 15064.4 of the CEQA Guidelines recommends that lead agencies quantify the GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project: the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable

significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs.

Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), as long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130(f)).[89] As a note, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact less than significant.

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project.[90] To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency.[91] Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions."[92] Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.[93]

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[89] *See, generally, Section 15130(f); see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, dated April 13, 2009.*

[90] *14 CCR § 15064(h)(3).*

[91] *14 CCR § 15064(h)(3).*

[92] *14 CCR § 15064(h)(3).*

[93] *See, for example, San Joaquin Valley Air Pollution Control District, CEQA Determinations of Significance tor Projects Subject to ARB's GHG Cap-and-Trade Regulation, APR—2030 (June 25, 2014), in which the SJVAPCD "determined that GHG emissions increases that are covered under ARB's Cap-and-Trade regulation cannot constitute significant increases under CEQA…" Further, the South Coast Air Quality*

(Footnote continued on next page)

In the absence of any applicable adopted numeric threshold, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. For this Project, as a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions is SCAG's RTP/SCS, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the State's long-term climate goals. This analysis also considers consistency with regulations or requirements adopted by the AB 32 *2008 Climate Change Scoping Plan* and subsequent updates, and the City of Los Angeles' Green New Deal.

(2) SCAQMD Thresholds

As discussed above, the SCAQMD has an interim GHG significance threshold of 10,000 $MTCO_2e$ per year for stationary source/industrial projects where the SCAQMD is the lead agency. This SCAQMD interim GHG significance threshold is not applicable to the Project as the Project is a residential project and the City of Los Angeles is the Lead Agency.

(3) 2006 L.A. CEQA Thresholds Guide

The L.A. CEQA Thresholds Guide does not identify any criteria to evaluate GHG emissions impacts. Thus, the potential for the Project to result in impacts from GHG emissions is based on the CEQA Guidelines Appendix G thresholds. For the reasons set forth above, to answer both of the above questions, the City will consider whether the project is consistent with AB 32 and SB 375 (through demonstration of conformance with SCAG's 2016–2040 and 2020–2045 RTP/SCS), and the City of Los Angeles' Green New Deal. As discussed above, OPR has noted that lead agencies "should make a good-faith

Management District (SCAQMD) has taken this position in CEQA documents it has produced as a lead agency. The SCAQMD has prepared three Negative Declarations and one Draft Environmental Impact Report that demonstrate the SCAQMD has applied its 10,000 MTCO2e/yr. significance threshold in such a way that GHG emissions covered by the Cap-and-Trade Program do not constitute emissions that must be measured against the threshold. See: SCAQMD, Final Negative Declaration for: Ultramar Inc. Wilmington Refinery Cogeneration Project, SCH No. 2012041014 (October 2014); SCAQMD, Final Negative Declaration tor Phillips 66 Los Angeles Refinery Carson Plant—Crude Oil Storage Capacity Project, SCH No. 2013091029 (December 2014); Final Mitigated Negative Declaration for Toxic Air Contaminant Reduction for Compliance with SCAQMD Rules 1420.1 and 1402 at the Exide Technologies Facility in Vernon, CA, SCH No. 2014101040 (December 2014); and Draft Environmental Impact Report for the Breitburn Santa Fe Springs Blocks 400/700 Upgrade Project, SCH No. 2014121014 (April 2014).

effort to calculate or estimate GHG emissions" from a project.[94] Consistent with OPR guidelines, Project GHG emissions are quantified below.

b. Methodology

Amendments to Section 15064.4 of the CEQA Guidelines were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions. Consistent with existing CEQA practice, Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. This section recommends certain factors that may be used in the determination of significance (i.e., extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHGs). The amendments do not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies, or suggested by other experts, such as CAPCOA, so long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The California Natural Resources Agency has also clarified that the CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and that they should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15064(h)(3)).[95]

The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions. Nor has any other state or regional agency adopted a numerical significance threshold for assessing GHG emissions that is applicable to the Project. Since there is no applicable adopted or accepted numerical threshold of significance for GHG emissions, the methodology for evaluating the Project's impacts related to GHG emissions focuses on its consistency with statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. The evaluation of consistency with such plans is the sole basis for determining the significance of the Project's GHG emissions-related impacts on the environment.

Notwithstanding, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the Project using recommended air quality models, as described below. The primary purpose of quantifying the Project's GHG

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[94] *OPR Technical Advisory, p. 5.*

[95] *See generally California Natural Resources Agency, Final Statement of Reasons for Regulatory Action (December 2009), pp. 11–13, 14, 16; see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, April 13, 2009.*

emissions is to satisfy State CEQA Guidelines Section 15064.4(a), which calls for a good-faith effort to describe and calculate emissions. The estimated emissions inventory is also used to determine if there would be a reduction in the Project's incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions. However, the significance of the Project's GHG emissions impacts is not based on the amount of GHG emissions resulting from the Project.

(1) Consistency with Plans

The Project's GHG impacts are evaluated by assessing the Project's consistency with applicable statewide, regional, and local GHG reduction plans and strategies. As discussed previously, the City has established goals and actions to reduce the generation and emission of GHGs from both public and private activities in the Mayor's Sustainable City pLAn/L.A.'s Green New Deal.

The OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. Although the City does not have a programmatic mitigation plan to tier from, such as a Greenhouse Gas Emissions Reduction Plan, the City has a number of plans to help reduce GHG emissions, including the Sustainable City pLAn/L.A.'s Green New Deal, and Green Building Code that encourage and require applicable projects to implement energy efficiency measures. In addition, the California CAT Report provides recommendations for specific emission reduction strategies for reducing GHG emissions and reaching the targets established in AB 32 and Executive Order S-3-05. On a statewide level, the 2008 Climate Change Scoping Plan and subsequent updates provide measures to achieve AB 32 and SB 32 targets. On a regional level, SCAG's 2016-2040 and 2020–2045 RTP/SCS contain measures to achieve VMT reductions required under SB 375. Thus, if the Project is designed in accordance with these policies and regulations, the Project would result in a less than significant impact, because it would be consistent with the overarching state regulations on GHG reduction (AB 32, SB 32, AB 100, AB 1493, and SB 375).

A consistency analysis is provided and describes the Project's compliance with or exceedance of performance-based standards included in the regulations outlined in the applicable portions of the *2008 Climate Change Scoping Plan* and subsequent updates, SCAG's 2016–2040 and 2020–2045 RTP/SCS, and the Sustainable City pLAn/L.A.'s Green New Deal.

(2) Quantification of Emissions

In view of the above considerations, this Draft EIR quantifies the Project's total annual GHG emissions, taking into account the GHG emission reduction features that would be incorporated into the Project's design.

This Draft EIR quantifies the Project's annual GHG emissions and compares them to a Project without Reduction Features scenario, as defined by CARB's most updated projections for AB/SB 32.[96] This comparison is included herein for informational purposes only, including in order to disclose the relative carbon efficiency of the Project and to determine if there would be a reduction in the Project's incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions. The Project without Reduction Features scenario does not account for additional energy efficiency measures beyond what is required by code or measures to reduce natural gas usage. The City is focusing its determination of the significance of the Project's GHG emissions in relation to the Project's location and design and its consistency with plans and policies adopted to reduce GHGs, as explained below. However, the Project without Reduction Features does take into account certain regulatory measures included in the 2008 Climate Change Scoping Plan and subsequent updates, SCAG's /SCS, and the Sustainable City pLAn/LA Green New Deal.[97]

(3) Project GHG Emissions

The California Climate Action Registry (Climate Registry) General Reporting Protocol provides basic procedures and guidelines for calculating and reporting GHG emissions from a number of general and industry-specific activities.[98] The General Reporting Protocol is based on the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" developed by the World Business Council for Sustainable Development and the World Resources Institute through "a multi-stakeholder effort to develop a standardized approach to the voluntary reporting of GHG emissions."[99] Although no numerical thresholds of significance have been developed, and no specific protocols are available for land use projects, the General Reporting Protocol provides a basic framework

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[96] *The comparison to a BAU scenario is not used as a threshold of significance, but is used to provide information and a quantitative metric to measure the Project's GHG emissions and level of reductions from Project Design Features and characteristics.*

[97] *The CalEEMod model does not account for all regulatory measures in the 2008 Climate Change Scoping Plan and subsequent updates. However, the analysis does take into account reductions due to Pavley I and LCFS as discussed in further detail below.*

[98] *California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.*

[99] *California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.*

for calculating and reporting GHG emissions from the Project. The information provided in this section is consistent with the General Reporting Protocol's reporting requirements. A detailed discussion of the GHG methodology is included in Appendix C of this Draft EIR.

The General Reporting Protocol recommends the separation of GHG emissions into three categories that reflect different aspects of ownership or control over emissions.[100] They include the following:

- Scope 1: Direct, onsite combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel).
- Scope 2: Indirect, offsite emissions associated with purchased electricity or purchased steam.
- Scope 3: Indirect emissions associated with other emissions sources, such as third-party vehicles and embodied energy (e.g., energy used to convey, treat, and distribute water and wastewater).[101]

The General Reporting Protocol provides a range of basic calculations methods. However, the General Reporting Protocol calculations are typically designed for existing buildings or facilities. These retrospective calculation methods are not directly applicable to planning and development situations where buildings do not yet exist.

CARB recommends consideration of indirect emissions to provide a more complete picture of the GHG footprint of a facility. Annually reported indirect energy usage aids the conservation awareness of a facility and provides information to CARB to be considered for future strategies.[102] For example, CARB has proposed requiring the calculation of direct and indirect GHG emissions as part of the AB 32 reporting requirements. Additionally, OPR has noted that lead agencies "should make a good-faith effort, based on available information, to calculate, model, or estimate…GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and

[100] *USEPA, Greenhouse Gases at EPA, www.epa.gov/greeningepa/greenhouse-gases-epa, accessed October 20, 2020.*

[101] *Embodied energy is a scientific term that refers to the quantity of energy required to manufacture and supply to the point of use a product, material, or service.*

[102] *CARB, Initial Statement of Reasons for Rulemaking, Proposed Regulation for Mandatory Reporting of Greenhouse Gas Emissions Pursuant to the California Global Warming Solutions Act of 2006 (AB 32), Planning and Technical Support Division Emission Inventory Branch, October 19, 2007.*

construction activities."[103] Therefore, direct and indirect emissions have been calculated for the Project.

A fundamental difficulty in the analysis of GHG emissions is the global nature of the existing and cumulative future conditions. Changes in GHG emissions can be difficult to attribute to a particular planning program or project because the planning effort or project may cause a shift in the locale for some type of GHG emissions, rather than causing "new" GHG emissions. As a result, there is frequently an inability to conclude whether a project's GHG emissions represent a net global increase, reduction, or no change in GHGs that would exist if the project were not implemented. The analysis of the Project's GHG emissions is particularly conservative in that it assumes all of the GHG emissions are new additions to the atmosphere.

The California Emissions Estimator Model® (CalEEMod) is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California, who provided data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) to account for local requirements and conditions. The model is considered by the SCAQMD to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.[104]

(4) Construction

The Project's construction emissions were calculated using CalEEMod Version 2016.3.2. Details of the modeling assumptions and emission factors are provided in Appendix C of this Draft EIR. CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecast based on the construction assumptions included in Appendix C and applying the mobile-source and fugitive dust emissions factors derived from CalEEMod.

The calculations of the emissions generated during Project construction activities reflect the types and quantities of construction equipment that would be used to remove

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[103] *OPR Technical Advisory—CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review, June 2008, p. 5.*

[104] *California Air Pollution Control Officers Association, California Emissions Estimator Model, CalEEMod™, www.caleemod.com.*

existing buildings, grade and excavate the Project Site, construct the proposed buildings and related improvements, and plant new landscaping within the Project Site.

As impacts from construction activities occur over a relatively short-term period of time, they contribute a relatively small portion of the overall lifetime project GHG emissions. In addition, GHG emission reduction measures for construction equipment are relatively limited. In accordance with the SCAQMD's guidance, GHG emissions from construction were amortized (i.e., averaged annually) over the lifetime of the Project. SCAQMD defines the lifetime of a project as 30 years.[105] Therefore, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

(5) Operation

Similar to construction, the SCAQMD-recommended CalEEMod is used to calculate potential GHG emissions generated by new land uses on the Project Site, including area sources, electricity, natural gas, mobile sources, stationary sources (i.e., emergency generators), solid waste generation and disposal, and water usage/wastewater generation. CalEEMod default values for generation/usage rates, GHG emission factors, and GWP values were used in the evaluation of operational GHG emissions from the Project.

Area source emissions include landscaping, natural gas combustion (HVAC and water heaters), and architectural coating activities, the emissions are based on the size of the land uses (e.g., square footage or dwelling unit), the GHG emission factors for fuel combustion, and the GWP values for the GHGs emitted.

GHG emissions associated with electricity usage are based on the size of the land uses, the electrical demand factors for the land uses, the GHG emission factors for the electricity utility provider, as provided by CalEEMod, and the GWP values for the GHGs emitted. GHG emissions from electricity use are directly dependent on the electricity utility provider. In this case, GHG intensity factors for LADWP were selected in CalEEMod. The carbon intensity (lbs/MWh) for electricity generation was calculated for the Project buildout year based on LADWP projections for year 2023 (678 lbs. CO_2 per MWh). LADWP's carbon intensity projections also take into account SB 100 and SB 350 RPS requirements for renewable energy.

As with electricity, the emissions of GHGs associated with natural gas combustion are based on the size of the land uses, the natural gas combustion factors for the land uses

[105] *SCAQMD, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, 2008.*

in units of million British thermal units (MMBtu), the GHG emission factors for natural gas combustion, and the GWP values for the GHGs emitted.

Mobile source GHG emissions are calculated based on emission factors and an estimate of the Project's annual VMT, which was provided in the Project's Transportation Assessment.[106] As discussed in Section IV.I, Transportation, of this Draft EIR, the Project VMT was derived from the LADOT VMT Calculator. The VMT Calculator was developed by the City and LADOT to comply with SB 743 which requires lead agencies to adopt VMT criteria to determine transportation related impacts. The LADOT-derived VMT values account for the daily and seasonal variations in trip frequency and length associated with new resident, employee and visitor trips to and from the Project Site and other activities that generate a vehicle trip.

Stationary source GHG emissions are based on proposed stationary sources (i.e., emergency generators) that would be provided on the Project Site.

The emissions of GHGs associated with solid waste disposal are based on the Project's proposed land uses, the waste disposal rate for the land uses, the waste diversion rate, the GHG emission factors for solid waste decomposition, as provided by CalEEMod, and the GWP values for the GHGs emitted.

The GHG emissions related to water usage and wastewater generation are based on the proposed land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider as provided by CalEEMod, and the GWP values for the GHGs emitted. Water usage factors are obtained from surveys conducted throughout California for various land uses. Project water consumption GHG emissions are then quantified based on electricity usage and carbon intensity factors specific to electricity providers described above.

The GHG emissions calculations for the Project include credits or reductions for consistency with applicable Project Design Features GHG-PDF-1 and GHG-PDF-2 set forth in this Draft EIR. These features are included as part of the Buildout with Reducing Measures scenario shown in Table IV.D-10 on page IV.D-73 in the analysis below. The analysis of Project GHG emissions at buildout also takes into account actions and mandates already approved and expected to be in force by Project buildout (e.g., Pavley I Standards, full implementation of California's Statewide RPS beyond current levels of

[106] *Gibson Transportation Consulting, Transportation Assessment for Senior Residential Community at the Bellwood Project, February 2021, revised April 2021.*

renewable energy, and the California LCFS).[107] It should be noted that GHG reductions due to LCFS are currently not incorporated into CalEEMod. The CalEEMod model incorporates EMFAC2014 emission factors which do not take into account the most recent 2017 LCFS updates. As a conservative assumption, GHG emissions reductions resulting from the LCFS updates were not included in the Project's emissions inventory. In addition, as mobile source GHG emissions are directly dependent on the number of vehicle trips, a decrease in the number of Project-generated trips as a result of Project features (e.g., close proximity to transit) will provide a proportional reduction in mobile source GHG emissions compared to a generic project without such locational benefits. Calculation of Project emissions conservatively did not include actions and mandates that are not already in place, but are anticipated to be enforced by Project buildout (e.g., Pavley II, which could further reduce GHG emissions from use of light-duty vehicles by 2.5 percent). Similarly, GHG emissions reductions potentially attributable to operation of the Cap-and-Trade were not included in this analysis. By not speculating on potential regulatory conditions, the analysis takes a conservative approach that likely overestimates the Project's GHG emissions at buildout because the State is expected to continue to implement policies and programs aimed at reducing GHG emissions from the land use and transportation sectors to meet the State's long-term climate goals.

c. Project Design Features

The following project design features are applicable to the Project with regard to GHG emissions:

GHG-PDF-1: The design of the new buildings will incorporate the following sustainability features:

a. Use of Energy Star–labeled products and appliances.

b. Use of light-emitting diode (LED) lighting or other energy-efficient lighting technologies, such as occupancy sensors or daylight harvesting and dimming controls, where appropriate, to reduce electricity use.

c. Water-efficient plantings with drought-tolerant species;

d. Fenestration designed for solar orientation; and

e Pedestrian- and bicycle-friendly design with short-term and long-term bicycle parking.

GHG-PDF-2: The use of natural gas-fueled fireplaces will be limited to common areas and the top floor residential dwelling units.

[107] *Project design features are based on relevant year 2020 targets established by AB 32 and the current CARB Scoping Plan Update.*

The Applicant would incorporate additional Project features to further support and promote environmental sustainability. The Project would comply with all applicable regulatory requirements, including the provisions set forth in the City's Green Building Ordinance. As an example, the Project would comply with the City's EV charging requirements, which specify that 10 percent of new parking spaces would require EV charging equipment. In addition, 30 percent of all new parking spaces would be required to be EV "ready" which will be capable of supporting future EV charging equipment.[108]

d. Analysis of Project Impacts

Threshold (a): Would the Project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Threshold (b): Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG?

(1) Impact Analysis

(a) Consistency with Applicable Plans and Policies

As discussed above, compliance with applicable GHG emissions reduction plans would result in a less-than-significant Project and cumulative impacts. The following section describes the extent to which the Project complies with or exceeds the performance-based standards included in the regulations outlined in the 2008 Climate Change Scoping Plan and subsequent updates, SCAG's RTP/SCS, and the Sustainable City pLAn/L.A.'s Green New Deal. As shown herein, the Project would be consistent with the applicable GHG reduction plans and policies.

(i) Climate Change Scoping Plan

The Climate Change Scoping Plan has a range of GHG reduction actions that include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program. The following discussion demonstrates how the pertinent reduction actions relate to and reduce Project-related GHG emissions.

Project GHG emissions have been quantified, and as shown in Table IV.D-10 on page IV.D-73 in the analysis below, the Project would result in a net increase of

[108] *City of Los Angeles Ordinance No. 186485. December 11, 2019.*

approximately 367 $MTCO_2e$ annually when accounting for removal of existing uses. The breakdown of the Project's GHG emissions by source category, as calculated in Appendix C, shows that area source and mobile source emissions would result in a net reduction in GHG emissions due to removal of existing uses. Emissions from energy consumption, stationary sources, solid waste generation water supply, treatment, and distribution; and construction activities would increase in comparison to existing uses. Provided in Table IV.D-5 on page IV.D-50 is an evaluation of applicable mandatory regulatory compliance reduction actions/strategies outlined in the Climate Change Scoping Plan that through implementation would serve to reduce the Project's direct and indirect GHG emissions.[109] Further evaluation of project design features and specific applicable policies and measures in the Climate Change Scoping Plan is provided in Table IV.D-6 on page IV.D-53. As detailed therein, the Project would not conflict with the Climate Change Scoping Plan, which is intended to reduce GHG emissions.

As such, based on the analysis above and below, the Project would not conflict with the GHG reduction-related actions and strategies in the 2008 Climate Change Scoping Plan and subsequent updates, and related impacts would be less than significant.

(ii) 2016–2040 and 2020–2045 RTP/SCS

As previously discussed, the purpose of SB 375 is to implement the State's GHG emissions reduction goals by integrating land use planning with the goal of reducing car and light-duty truck travel. Under SB 375, the primary goal of the RTP/SCS is to provide a framework for future growth that will decrease per capita GHG emissions from cars and light-duty trucks based on land use planning and transportation options. To accomplish this goal, the 2016–2040 and 2020–2045 RTP/SCS identify various strategies to reduce per capita VMT.

The 2016–2040 and 2020–2045 RTP/SCS are expected to help SCAG reach its GHG reduction goals, as identified by CARB.

In addition to demonstrating the region's ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2016–2040 and 2020–2045 RTP/SCS outline a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the

[109] *An evaluation of reduction actions/strategies applicable to stationary sources is not necessary, as the Project's only potential stationary sources emissions will be created by emergency generators which would only be used in an emergency.*

Table IV.D-5
Mandatory Regulatory Compliance Measures within the Climate Change Scoping Plan

Mandatory Regulatory Compliance Measures
Energy
RPS Program and SB 2X: The California RPS program (Updated under SB 2X) requires both public and investor-owned utilities in California receive at least 33 percent of their electricity from renewable sources by the year 2020. SB 350 further requires 50 percent renewables by 2030.[a] In 2019, LADWP indicated that 32 percent of its electricity came from renewable resources in Year 2018.[b] Electricity GHG emissions provided in Table IV.D-10 on page IV.D-73 assume that LADWP will receive at least 33 percent of its electricity from renewable sources by the year 2020 and 50 percent by the year 2030 (with a straight line interpolation for the Project buildout year of 2023) consistent with SB 350. The CalEEMod default carbon intensity for electricity generated by LADWP (pounds of CO_2e per MWh) is based on a year 2007 renewables portfolio of eight percent and was therefore updated within CalEEMod to reflect the year 2023 renewables portfolio. Please note that under recently passed SB 100, LADWP is required to generate electricity that would increase renewable energy resources to 50 percent by 2026 and, 60 percent by 2030, and 100 percent by 2045. The Project complies with these percentage renewable requirements inasmuch as the Project is served by LADWP, which is committed to achieving the increase in renewable energy resources by the required dates. The electricity-related GHG emissions provided in Table IV.D-10 on page IV.D-73 conservatively do not account for the additional 13 percent reduction that would be achieved by LADWP in year 2023 prior to buildout of the Project (difference between the 37 percent renewables assumed for the buildout year of 2023 and 50 percent required under SB 100 in year 2026) or 23 percent reduction achieved by LADWP in year 2030 (difference between the 37 percent renewables assumed for the buildout year of 2023 and 60 percent required under SB 100 in year 2030). Given LADWP's progress towards meeting and exceeding the established targets as well as penalties for non-compliance, it is assumed LADWP will comply. **SB 350**: As required under SB 350, doubling of the energy efficiency savings from final end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under CCR Title 24, Part 6 (discussed below) and utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems, and insulation. The Project would further support this regulation since Project Design Feature GHG-PDF-1, would require the Project to implement measures to reduce overall energy usage compared to baseline conditions.
Energy Independence and Security Act of 2007 (EISA): EISA requires phasing out of incandescent light bulbs sold in the United States resulting in 25 percent greater light bulb efficiency in 2014 and 200 percent greater efficiency in 2020. CalEEMod does not incorporate this nationwide reduction in electricity usage associated with lighting. As the Project would benefit from implementation of the EISA, electricity GHG emissions provided in Table IV.D-10 on page IV.D-73 account for a 25-percent reduction in lighting electricity consumption. **Cap-and-Trade Program**: As required by AB 32 and the *Climate Change Scoping Plan*, the Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, this regulatory program applies to electric service providers and not directly to land use development. That being said, the Project would benefit from this regulatory program in that the GHG emissions associated with the Project's electricity usage per year presented in Table IV.D-10 on page IV.D-73 would indirectly be covered by the Cap-and-Trade Program. Furthermore, the Cap-and-Trade Program also covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. While not quantified in this analysis, the Project would benefit from this regulatory program in that the GHG emissions associated with the Project's electricity and fuel usage would indirectly be covered by the Cap-and-Trade Program.
Mobile
Advanced Clean Cars Program: CARB approved the Advanced Clean Cars Program in 2012 which establishes an emissions control program for model year 2017 through 2025 and increasing the number of

Table IV.D-5 (Continued)
Mandatory Regulatory Compliance Measures within the Climate Change Scoping Plan

Mandatory Regulatory Compliance Measures
zero emission vehicles manufactured in the 2018 through 2025 model years. Standards under the Advanced Clean Cars Program apply to all passenger cars and light duty trucks within California and indirectly used by residents, employees and deliveries to the Project. Mobile source GHG emissions provided in Table IV.D-10 on page IV.D-73 conservatively do not include this additional 34 percent reduction in mobile source emissions as the CalEEMod model default fleet mix for the Air Basin does not yet account for this regulation. The Project would further support this regulation since the Applicant will provide at least 30 percent of the total parking spaces provided to be capable of supporting future EVSE as dictated by City codes. The Scoping Plan recommends additional mobile source strategies through the extension of the Advanced Clean Cars Program which are expected to increase GHG stringency on light duty autos and continue adding zero emission and plug in vehicles through 2030. CARB is also developing the Innovative Clean Transit measure to encourage purchase of advanced technology buses such as alternative fueled or battery powered buses. This would allow fleets to phase in cleaner technology in the near future. CARB is also in the process of developing proposals for new approaches and strategies to achieve zero emission trucks under the Advanced Clean Local Trucks (Last Mile Delivery) Program.[c,d] Although the Innovative Clean Transit and Advanced Clean Local Truck Programs have not yet been established, the Modified Project would also indirectly benefit from these measures once adopted. **Low Carbon Fuel Standard (LCFS)**: The current LCFS requires a reduction of at least 7.5 percent in the carbon intensity (CI) of California's transportation fuels by 2020. CalEEMod includes implementation of LCFS into the calculation of GHG emissions from mobile sources. However, the LCFS was amended in September 2018 to target a 20-percent reduction in CI from a 2010 baseline by 2030.[e] As discussed previously, the CalEEMod model does not take into account the more recent updates to LCFS. The Project's emissions inventory conservatively does not take credit for additional GHG reductions due to the more recent LCFS requirements, but this additional 7.5-percent reduction in CI would indirectly reduce the Project's mobile source emissions.
Solid Waste
California Integrated Waste Management Act of 1989: The regulation requires each jurisdiction's source reduction and recycling element to include a diversion of 50 percent of all solid waste by 2000.[f] **AB 341 (2011)** amended the regulation to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter.[g] The Project complies with these percentage recycling requirements inasmuch as the Project is served by the City of Los Angeles, which currently achieves a diversion rate of 76 percent. Project-related GHG emissions from solid waste generation provided in Table IV.D-10 on page IV.D-73 includes a 76-percent reduction in solid waste generation source emissions consistent with the minimum diversion rate required for the City of Los Angeles (CalEEMod default diversion rate is zero percent). The Applicant must also only contract for waste disposal services with a company that recycles solid waste in compliance with AB 341. In addition, the Project would provide recycling bins at appropriate locations to promote recycling of paper, metal, glass and other recyclable material. Consistent with CalGreen requirements, the Project would recycle and/or salvage at least 65 percent of non-hazardous construction and demolition debris, and the Applicant would prepare a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials will be sorted on-site or comingled.

[a] *SB 350 (2015–2016 Regular Session) Stats 2015, Ch. 547.*

[b] *CEC, Annual Power Content Labels for 2017, LADWP, July 2018.*

[c] *CARB, Advance Clean Cars, Midterm Review, www.arb.ca.gov/msprog/acc/acc-mtr.htm, accessed October 20, 2020.*

Table IV.D-5 (Continued)
Mandatory Regulatory Compliance Measures within the Climate Change Scoping Plan

Mandatory Regulatory Compliance Measures
[d] *CARB, Advanced Clean Local Trucks (Last mile delivery and local trucks), ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks, accessed October 20, 2020.*
[e] *CARB, LCFS Rulemaking Documents, www.arb.ca.gov/fuels/lcfs/rulemakingdocs.htm, accessed October 20, 2020.*
[f] *California Integrated Waste Management Act of 1989 and AB 341.*
[g] *AB 341 (2011).*
Source: Eyestone Environmental, 2019.

2016–2040 and/or 2020–2045 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use. With regard to individual developments, such as the Project, strategies and policies set forth in the 2016–2040 and/or 2020–2045 RTP/SCS can be grouped into the following three categories: (1) reduction of vehicle trips and VMT, (2) increased use of alternative fuel vehicles, and (3) improved energy efficiency. These strategies and policies are addressed below.

Consistency with Integrated Growth Forecast

The 2016–2040 and 2020–2045 RTP/SCS provide socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review.

According to SCAG's 2016 RTP/SCS, the forecasted population for the City of Los Angeles Subregion in 2019 was approximately 4,036,475 persons.[110] In 2023, the projected occupancy year of the Project, the City of Los Angeles Subregion is anticipated to have a population of approximately 4,145,604 persons.[111] The 2016-2040 RTP/SCS's employment forecast for the City of Los Angeles Subregion in 2019 was approximately 1,814,575 employees.[112] In 2023, the City of Los Angeles Subregion is anticipated to have approximately 1,882,104 employees.[113] The 2016–2040 RTP/SCS's household forecast

[110] *Based on a linear interpolation of 2012–2040 data.*

[111] *Based on a linear interpolation of 2012–2040 data.*

[112] *Based on a linear interpolation of 2012–2040 data.*

[113] *Based on a linear interpolation of 2012–2040 data.*

Table IV.D-6
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
California Code of Regulations (CCR), Title 20: The 2016 Appliance Efficiency Regulations, adopted by the California Energy Commission (CEC), include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California.	State and CEC	**No Conflict.** These standards are included in default parameters provided in Table IV.D-10 on page IV.D-73. These standards would apply to appliances used during Project operations.
CCR, Title 24, Building Standards Code: The 2019 Building Energy Efficiency Standards contained in Title 24, Part 6 (also known as the California Energy Code), requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.[a] The California Green Building Standards Code (Part 11, Title 24) established mandatory and voluntary standards on planning and design for sustainable site development, energy efficiency (extensive update of the California Energy Code), water conservation, material conservation, and internal air contaminants.	State and CEC	**No Conflict.** Consistent with regulatory requirements, the Project shall comply with applicable provisions of the 2020 Los Angeles Green Building Code that in turn require compliance with mandatory standards included in the CALGreen Code. The 2019 Title 24 standards are substantially more efficient than the 2016 Title standards. The 2016 standards are included in default parameters provided in CalEEMod. Therefore, a conservative 10 percent reduction was applied to the default CalEEMod parameters to account for the more stringent 2019 Title 24 standards and are reflected in Project-related GHG emissions provided in Table IV.D-10 on page IV.D-73
Assembly Bill 1109 (AB 1109): The Lighting Efficiency and Toxic Reduction Act prohibits a person from manufacturing for sale in the state specified general purpose lights that contain levels of hazardous substances, as it requires the establishment of minimum energy efficiency standards for all general service incandescent lamps. The standards are structured to reduce average statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018.[b]	State/ Manufacturers	**No Conflict.** The Project would not conflict with requirements under AB 1109 because it complies with local and state green building programs and incorporates energy efficient lighting and electricity consumption with implementation of GHG-PDF-1. This reduction was not reflected in CalEEMod default assumptions and was therefore included in the calculation of Project GHG emissions.
Senate Bill (SB) 375: SB 375 requires integration of planning processes for transportation, land-use and housing. Under SB 375, each Metropolitan Planning Organization would be required to adopt a Sustainable Community	State, CARB Regional, SCAG	**No Conflict.** SB 375 requires SCAG to direct the development of the SCS for the region. The Project represents an infill development within an existing urbanized area that would concentrate new residential uses within an HQTA. As required

Table IV.D-6 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Strategy (SCS) to encourage compact development that reduces passenger vehicle miles traveled and trips so that the region will meet a target, created by CARB, for reducing GHG emissions.		under SB 375, CARB is required to update regional GHG emissions targets every 8 years with the last update formally adopted in March 2018. As part of the 2018 updates, CARB has adopted a passenger vehicle related GHG reduction of 19 percent for 2035 for the SCAG region. As discussed below, the Project results in a Total VMT per capita of 9.9 which would support the 19.2 VMT per capita targeted goal in the 2020–2045 RTP/SCS for 2045 and CARB's updated 2035 target. Therefore, the Project would be consistent with SB 375, the reduction in passenger vehicle GHG emissions per capita goals provided in the 2020–2045 RTP/SCS.
By 2019, adjust performance measures used to select and design transportation facilities. • Harmonize project performance with emissions reductions, and increase competitiveness of transit and active transportation modes (e.g., via guideline documents, funding programs, project selection, etc.).	CalSTA and SGC, OPR, CARB, GoBiz, IBank, DOF, CTC, Caltrans	**No Conflict.** The Project would not involve construction of transportation facilities. However, the Project Site is located within 0.25-mile of bus stops served by the Culver City Bus and Santa Monica Big Blue Bus lines. In addition, Metro, Antelope Valley Transit Authority, Santa Clarita Transit, and LADOT Commuter Express bus lines are also located within 0.5-mile of the site, and the Project is also located approximately 0.5-mile from the future Metro Purple Line rail station. The Project benefits from these bus stops by encouraging use of mass transit resulting in a reduction of Project-related vehicle trips to and from the Project Site.
By 2019, develop pricing policies to support low-GHG transportation (e.g., low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA, Caltrans, CTC, OPR/SGC, CARB	**No Conflict.** The Project would support this policy since the Applicant would provide electric vehicle charging stations and electric vehicle supply wiring consistent with City codes.
Implement California Sustainable Freight Action Plan: • Improve freight system efficiency. • Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	CARB	**Not Applicable.** The Project land uses would not include freight transportation or warehousing. Therefore, the Project would not interfere or impede the implementation of the Sustainable Freight Action Plan.

Table IV.D-6 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
CCR, Title 24, Building Standards Code: The California Green Building Standards Code (Part 11, Title 24) includes water efficiency requirements for new residential and non-residential uses, in which buildings shall demonstrate a 20-percent overall water use reduction.	State	**No Conflict.** The Project will comply with applicable provisions of the 2020 Los Angeles Green Building Code which in turn requires compliance with mandatory standards included in the CALGreen Code (20-percent overall water use reduction). Project water consumption would be consistent with the requirements under City of Los Angeles Ordinance No. 184,248, 2016 California Plumbing Code, 2019 CALGreen Code, 2017 Los Angeles Plumbing Code, and 2020 Los Angeles Green Building Code. Compliance with these requirements would reflect an approximately 20 percent reduction in water usage as compared to the base demand provided in CalEEMod. The Project's reduction in water usage would also reduce energy and associated emissions required to pump and treat water.
Million Solar Roofs Program: The program is implemented through SB 1 (Murray, 2006), which provides up to $3.3 billion in financial incentives for the installation of residential, commercial and institutional solar PV programs.		**No Conflict.** The Project would comply with Title 24 and the Los Angeles Green Building Code which requires that rooftop areas on multi-family buildings and non-residential buildings to set aside a minimum area for potential installation of solar panels at a later date. Thus, the Project would be considered "solar-ready." If solar panels are to be installed at a later date, the Project would be eligible for the financial incentives offered by this program.
Senate Bill X7-7: The Water Conservation Act of 2009 sets an overall goal of reducing per-capita urban water use by 20 percent by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per-capita water use by at least 10 percent by December 31, 2015. This is an implementing measure of the Water Sector of the AB 32 Scoping Plan. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convene, treat, and distribute the water; it also reduces emissions from wastewater treatment.	State	**No Conflict.** As discussed above under Title 24, the Project would incorporate water conservation features that would contribute towards meeting this performance based standard. Such measures include compliance with the Los Angeles Green Building Code, CalGreen, and the California Plumbing Code. Project Design Feature GHG-PDF-1 would also incorporate water efficient plantings with drought-tolerant species to reduce water usage. The Project thereby includes measures consistent with the GHG reductions sought by SB X7-7 related to water conservation and related GHG emissions.
Implement the Short-Lived Climate Pollutant Strategy by 2030: • 40-percent reduction in methane and hydrofluorocarbon	CARB, CalRecycle, CDFA, SWRCB,	**No Conflict.** Senate Bill 605 (SB 605) was adopted in 2014 which directs CARB to develop a comprehensive Short-Lived Climate Pollutant (SLCP) strategy. Senate Bill 1383 was later

Table IV.D-6 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
emissions below 2013 levels. • 50-percent reduction in black carbon emissions below 2013 levels.	Local air districts	adopted in 2016 to require CARB to set statewide 2030 emission reduction targets of 40 percent for methane and hydrofluorocarbons and 50 percent black carbon emissions below 2013 levels.[e] SB 1383 requires various agencies including CARB, California Department of Food and Agriculture (CDFA), the State Water Resources Board (SWRCB) to be responsible for adopting regulations to reduce GHG emissions. These regulations would be applicable to the Project. Therefore, the Project would comply with the CARB SLCP Reduction Strategy which limits the use of hydrofluorocarbons for refrigeration uses.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	CARB, CalRecycle, CDFA, SWRCB, Local air districts	**No Conflict.** Under SB 1383, the California Department of Resources Recycling and Recovery (CalRecycle) is responsible for achieving a 50-percent reduction in the level of statewide disposal of organic waste from the 2014 level by 2020 and 75-percent reduction by 2025. In October 2019, CalRecycle released a revised draft of SB 1383 regulations with the formal comment period ending October 18, 2019. Adoption of the regulations to achieve SB 1383 targets is expected in 2021.[f] The Project would not conflict with AB 341, which requires not less than 75 percent of commercially generated solid waste generated (including organic waste) be source reduced through recycling, composting or diversion. Reduction in solid waste generated by the Project would reduce overall GHG emissions. Compliance with AB 341 would also help achieve the goals of SB 1383. This reduction in solid waste generation was accounted for in the calculation of Project GHG emissions.

CalRecycle = California Department of Resources Recycling and Recovery
CalSTA = California State Transportation Agency
Caltrans = California Department of Transportation

Table IV.D-6 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis

CARB = California Air Resources Board
CDFA = California Department of Food and Agriculture
CTC = California Transportation Commission
DOF = California Department of Finance
GoBiz = =Governor's Office of Business and Economic Development
SCAG = Southern California Association of Governments
SGC = Strategic Growth Council
SWRCB = State Water Resources Control Board

[a] *CEC, Adoption Hearing, 2019 Building Energy Efficiency Standards.*
[b] *2007b. Assembly Bill 1109 (2007–2008 Reg. Session) Stats. 2007, Ch. 534.*
[c] *Cal. Pub. Res. Code § 41780.01(a).*
[d] *CARB, Truck and Bus Regulation—On-Road Heavy Duty Diesel Vehicles (In-Use) Regulation, www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm, accessed November 20, 2020.*
[e] *CARB, Reducing Short-Lived Climate Pollutants in California, www.arb.ca.gov/cc/shortlived/shortlived.htm.*
[f] *CARB, Short-Lived Climate Pollutants (SLCP): Organic Waste Methane Emissions Reductions, www.calrecycle.ca.gov/climate/slcp/.*

Source: Eyestone Environmental, 2019.

within the City of Los Angeles Subregion in 2019 was 1,416,700.[114] In 2023, the number of households within the City of Los Angeles Subregion is anticipated to be 1,468,814.[115]

According to SCAG's 2020–2045 RTP/SCS, the forecasted population for the City of Los Angeles Subregion in 2019 is approximately 4,020,438 persons.[116] In 2023, the projected occupancy year of the Project, the City of Los Angeles Subregion is anticipated to have a population of approximately 4,135,955 persons.[117] The 2020-2045 RTP/SCS's employment forecast for the City of Los Angeles Subregion in 2019 was approximately 1,878,052 employees.[118] In 2023, the City of Los Angeles Subregion is anticipated to have approximately 1,917,721 employees.[119] The 2020-2045 RTP/SCS's household forecast within the City of Los Angeles Subregion in 2019 was 1,411,069.[120] In 2023, the number of households within the City of Los Angeles Subregion is anticipated to be 1,469,828.[121]

The Project proposes 192 senior housing residential units, consisting of 46 studio memory care guest rooms, 51 one-bedroom assisted living guest rooms, 24 two-bedroom assisted living guest rooms, 43 one-bedroom independent living dwelling units, and 28 two-bedroom independent living dwelling units in an eldercare facility for persons age 62 and older. Based on the generation rates used in the City of Los Angeles VMT Calculator, the Project would provide housing to approximately 231 residents and generate 88 employees.[122] Per the 2016–2040 RTP/SCS, the estimated 231 new residents generated by the Project would represent approximately 0.21 percent of the population growth forecasted by SCAG in the City of Los Angeles Subregion between 2019 and 2023, and the Project's estimated 88 employees would constitute approximately 0.13 percent of the employment growth forecasted between 2019 and 2023. The Project's 192 units would

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[114] *Based on a linear interpolation of 2012–2040 data.*

[115] *Based on a linear interpolation of 2012–2040 data.*

[116] *Based on a linear interpolation of 2016–2045 data.*

[117] *Based on a linear interpolation of 2016–2045 data..*

[118] *Based on a linear interpolation of 2016–2045 data.*

[119] *Based on a linear interpolation of 2016–2045 data.*

[120] *Based on a linear interpolation of 2016–2045 data.*

[121] *Based on a linear interpolation of 2016–2045 data.*

[122] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H, of this Draft EIR. The VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would represent approximately 0.22 percent of SCAG's projected population growth for the City of Los Angeles Subregion between 2019 and 2023 as compared to approximately 0.21 percent. As such, it would be well within SCAG's projections for the City of Los Angeles Subregion, and the conclusions of the analysis would remain the same.*

represent approximately 0.37 percent of the household growth forecasted by SCAG between 2019 and 2023.

Per the 2020–2045 RTP/SCS, the estimated 231 new residents generated by the Project would represent approximately 0.20 percent of the population growth forecasted by SCAG in the City of Los Angeles Subregion between 2019 and 2023,[123] the estimated 88 employees would constitute approximately 0.22 percent of the employment growth forecasted between 2019 and 2023. The Project's 192 units would constitute 0.33 percent of the household growth within the City of Los Angeles Subregion between 2019 and 2023.

Accordingly, the Project's generation of residents and employees would be consistent with the population and employment projections contained in the 2020–2045 RTP/SCS. Refer to Section IV.E, Land Use and Planning, of this Draft EIR, for additional information regarding consistency with the 2020–2045 RTP/SCS.

Consistency with VMT Reduction Strategies and Policies

As discussed above, OPR states that achieving 15 percent lower per capita VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals. The 2016–2040 RTP/SCS includes, for the SCAG region as a whole, a daily 22.8 Total VMT per capita for the 2012 Base Year, and a daily 20.5 Total VMT per capita for the 2040 Plan Year. For Los Angeles County, the 2012 Base Year daily Total VMT per capita is 21.5 and the daily Total VMT per capita is 18.4 for the 2040 Plan Year. In addition, the 2020–2045 RTP/SCS includes a Los Angeles County daily 19.2 Total VMT per capita for the 2045 Plan Year. To analyze the consistency of the Project with the 2016–2040 and 2020–2045 RTP/SCS, the Project's Total Daily VMT was divided by the Project's service population (employees and residents) to arrive at the per capita Total Daily VMT. The estimate, as provided in Table IV.D-7 on page IV.D-60, was compared to the VMT data for Los Angeles County provided by the 2016-2040 RTP/SCS for the 2040 Plan Year and the 2020–2045 RTP/SCS for the 2045 Plan Year.[124] As shown in Table IV.D-7, the Project's Total VMT per capita was lower by 46 percent in comparison to the 2040 Plan Year and was lower by 48 percent in comparison to the 2045 Plan Year. This level of VMT per capita is consistent with OPR's

[123] *As noted above the VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would represent approximately 0.21 percent of SCAG's projected population growth for the City of Los Angeles Subregion between 2019 and 2023 as compared to approximately 0.20 percent. As such, it would be well within SCAG's projections for the City of Los Angeles Subregion, and the conclusions of the analysis would remain the same.*

[124] *The VMT percentages in Table IV.D-7 and this section are not numeric thresholds but are used as a basis to compare a project's overall consistency with state plans and policies.*

Table IV.D-7
Comparison of Project Total VMT/Capita to 2020–2045 RTP/SCS

Scenario	Daily Weekday Trips
Total VMT (Project)[a]	3,171 Daily VMT
Service Population (Residents and Employees)[b]	319
Total VMT Per Capita	9.9 VMT/Capita (Daily)
SCAG Los Angeles VMT/Capita for 2045 Plan Year[c]	19.2 Daily VMT/Capita
Percent Reduction	48 Percent
SCAG Los Angeles VMT/Capita for 2040 Plan Year[d]	18.4 Daily VMT/Capita
Percent Reduction	46 Percent

[a] *VMT was calculated using the LADOT VMT Calculator. The results are provided in Traffic Assessment within Appendix H of this Draft EIR.*

[b] *The Service Population includes the estimated number of new residents (231) and new workers (88). As noted above, the VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita. If full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which combined with the Project's employees would represent a total VMT per capita of 9.6 VMT per day as compared to 9.9 VMT per day and would be further below the Los Angeles County goals provided in the RTP/SCS.*

[c] *SCAG Connect SoCal, Page 122*

[d] *SCAG 2016-2040 RTP/SCS, Page 154*

Source: Gibson Transportation Consulting, 2021.

recommended reduction in VMT per capita to meet the State's GHG emission reduction goals and consistent with SCAG's VMT per capita within Los Angeles County for the 2040 and 2045 Plan Year.

The Project would be designed and constructed to incorporate features to support and promote environmental sustainability. The Project represents an infill development within an existing urbanized area that would introduce a new senior residential use on the Project Site, within an HQTA. The Project's proximity to mass transit would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. The Project Site is also located approximately 0.5-mile south of the Metro Purple Line station at Constellation Boulevard and Avenue of the Stars currently being constructed. In addition, the Project Site is served by six Metro bus lines, one Culver City Bus line, and three Santa Monica Big Blue Bus lines. The Project would also provide required short- and long-term bicycle parking spaces in compliance with the requirements of the LAMC. The increase in bicycle parking spaces provided on-site would further reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. Project design would also provide pedestrian access that minimizes barriers and links the Project Site with existing or planned external streets to encourage people to walk instead of drive.

As shown in Appendix H of the Draft EIR, the Traffic Assessment accounts for project features, including bicycle parking per LAMC requirements, that would reduce trips and VMT as compared to the Project without implementation of VMT reducing-measures within the South Coast Air Basin (Air Basin) as calculated within the LADOT VMT Calculator. These relative reductions in vehicle trips and VMT from the Project without implementation of VMT reducing measures within the Air Basin help quantify the GHG emissions reductions achieved by locating the Project in an infill, HQTA area that promotes alternative modes of transportation.

Previously, trip generation for land uses was calculated based on survey data collected by the Institute of Transportation Engineers (ITE). However, these ITE trip generation rates were based on data collected at suburban, single-use, free standing sites, which may not be representative of urban mixed-use environments. Beginning in 2019, the USEPA has sponsored a study to collect travel survey data from mixed-use developments in order provide a more representative trip generation rate for multi-use sites. Results of the USEPA survey indicate that trip generation and VMT are affected by factors such as resident and job density, availability of transit, and accessibility of biking and walking paths. Based on these factors, the USEPA has developed equations known as the EPA Mixed-Use Development (MXD) model to calculate trip reductions for multi-use developments.[125] The LADOT VMT Calculator incorporates the USEPA MXD model and accounts for project features such as increased density and proximity to transit, which would reduce VMT and associated fuel usage in comparison to free-standing sites. The MXD model incorporated in the LADOT VMT Calculator was further refined to reflect conditions of the City based on survey data from market rate and affordable housing sites, as well as office and mixed-use developments. In particular, the base trip generation rates, mode split assumptions, and demographic data in the MXD model were refined to more closely represent neighborhood characteristics of the City. As shown in Appendix C, incorporation of USEPA MXD VMT reduction features applicable to the Project results in a 23 percent reduction in overall VMT and resultant GHG emissions compared to the unadjusted baseline ITE trip generation rates and LADOT VMT Calculator.

As shown in Table IV.D-7 on page IV.D-60, the Project's total daily VMT per capita is 9.9 miles. Total Project VMT per capita is approximately 46 and 48 percent below the Los Angeles County's daily Total VMT per capita for the 2040 and 2045 RTP/SCS Plan Years respectively. This reduction in VMT would support the SB 375 targets and goals of the 2016–2040 and 2020–2045 RTP/SCS with an estimated 19-percent decrease in per

[125] *Environmental Protection Agency, Mixed-Use Trip Generation Model. www.epa.gov/smartgrowth/mixed-use-trip-generation-model, accessed October 20, 2020.*

capita GHG emissions from passenger vehicles by 2035.[126] This reduction is attributable to the Project characteristics of being an infill project near transit that supports multi-modal transportation options.

The Project would also be consistent with the following key GHG reduction strategies in SCAG's 2016–2040 and 2020–2045 RTP/SCS, which are based on changing the region's land use and travel patterns:

- Compact growth in areas accessible to transit;
- Jobs and housing closer to transit;
- New housing and job growth focused in HQTAs; and
- Biking and walking infrastructure to improve active transportation options and transit access.

As discussed previously, the Project would develop new senior residential uses within a HQTA, which is defined by the 2016–2040 and 2020–2045 RTP/SCS as generally walkable transit villages or corridors that are within 0.5-mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours (see Section IV.E, Land Use and Planning, of this Draft EIR for further details). The Project Site is located near a future Metro Purple Line station and is served by Metro, Culver City Bus and Santa Monica Big Blue Bus lines. Bicycle parking and amenities provided by the Project would further encourage biking. These and other measures would further promote a reduction in VMT and subsequent reduction in GHG emissions, which would be consistent with the goals of SCAG's 2016–2040 and 2020–2045 RTP/SCS.

Increased Use of Alternative Fueled Vehicles Policy Initiative

The second category of strategies and policies of the 2016–2040 and 2020–2045 RTP/SCS, with regard to individual development projects, such as the Project, is to increase alternative fueled vehicles to reduce per capita GHG emissions. The 2016–2040 and 2020–2045 RTP/SCS policy initiative focuses on providing charge port infrastructure and accelerating fleet conversion to electric or other near zero-emission technologies. The Project would provide at least 30 percent of the total LAMC-required parking spaces

[126] *CARB updated the SB 375 targets for the SCAG region, requiring a 19-percent decrease in per capita GHG emissions by 2035 in comparison to a 2005 baseline. Implementation of the 2020–2045 RTP/SCS or the next plan is expected to fulfill and exceed the region's obligations under SB 375 with respect to meeting the State's VMT and related GHG emission reduction goals.*

provided to be capable of supporting future EVSE and 10 percent of the LAMC-required parking spaces will be equipped with EV charging stations as dictated by City code.

Energy Efficiency Strategies and Policies

The third category of strategies and policies of the 2016–2040 and 2020–2045 RTP/SCS for individual developments, such as the Project, involves improving energy efficiency (e.g., reducing energy consumption) to reduce GHG emissions. The 2016–2040 and 2020–2045 RTP/SCS goal is to actively encourage and create incentives for energy efficiency, where possible. As discussed in Section II, Project Description, of the Draft EIR, the Project will incorporate environmentally sustainable building features and construction protocols required by the Los Angeles Green Building Code and CALGreen. These standards would reduce energy and water usage and waste and, thereby, reduce associated greenhouse gas emissions and help minimize the impact on natural resources and infrastructure. The Project sustainability features to be incorporated into Project Design Feature GHG-PDF-1 include, but are not limited to,; Energy Star–labeled appliances; and water-efficient landscape design. In addition, Project Design Feature GHG-PDF-1 would require the design of the new buildings to incorporate features to further reduce energy usage. Furthermore, the Project would be subject to the 2019 Title 24 Standards that represent "a major step towards meeting the Zero Net Energy (ZNE) goal."

Land Use Assumptions

At the regional level, the 2016–2040 and 2020–2045 RTP/SCS are plans adopted for the purpose of reducing GHGs. In order to assess the Project's consistency with the 2016–2040 and 2020–2045 RTP/SCS, this Draft EIR also analyzes the Project's land use characteristics for consistency with those utilized by SCAG in its Sustainable Communities Strategy. Generally, projects are considered consistent with the provisions and general policies of applicable City and regional land use plans and regulations, such as the 2016–2040 and 2020–2045 RTP/SCS, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals. The Project's consistency with the applicable goals and principles set forth in the 2016–2040 and 2020–2045 RTP/SCS is discussed in Section IV.E, Land Use and Planning, of the Draft EIR and detailed in Table 5 of Appendix E of the Draft EIR. As shown in Table 5 of Appendix E of the Draft EIR , the Project is consistent with the goals and principles set forth in the 2016-2040 and 2020–2045 RTP/SCS.

In sum, the Project is the type of land use development that is encouraged by the 2016–2040 and 2020–2045 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land

use and transportation sectors required by SB 375, which, in turn, advances the State's long-term climate policies.[127] By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with state regulatory requirements.

Overall, the Project would not conflict with the GHG reduction-related actions and strategies contained in the 2016–2040 and 2020–2045 RTP/SCS. As such, impacts related to consistency with the 2020–2045 RTP/SCS would be less than significant.

(iii) City of Los Angeles Sustainable City pLAn/L.A.'s Green New Deal

As discussed above, the Sustainable City pLAn includes both short-term and long-term aspirations through the year 2050 in various topic areas, including water, solar power, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, and air quality, among others. The Sustainable City pLAn provides information as to what the City will do with buildings and infrastructure in their control, and provides specific targets related to housing and development, as well as mobility and transit, including the reduction of vehicle miles traveled per capita by 5 percent by 2025, and increasing trips made by walking, biking or transit by at least 35 percent by 2025. The Sustainable City pLAn was updated in April 2019 and renamed as L.A.'s Green New Deal which has established targets such as 100 percent renewable energy by 2045, installation of 10,000 publicly available EV chargers by 2022 and 28,000 by 2028, diversion of 100 percent of waste by 2050, and recycling 100 percent of wastewater by 2035. Table IV.D-8 on page IV.D-65 provides a discussion of the Project's consistency with applicable GHG-reducing actions from the City of LA's Green New Deal. As discussed therein, the Project would not conflict with the applicable goals and actions of the City of LA Green New Deal.

Although the Sustainable City pLAn/L.A.'s Green New Deal is not directly applicable to private development projects, the Project would generally be consistent with these targets as it is an infill development consisting of residential uses on a Project Site located approximately 0.5-mile from a future Metro Purple Line station. In addition, the Project Site is served by the Culver City Bus and Santa Monica Big Blue Bus lines, which are within 0.25-mile of the site. Metro, Antelope Valley Transit Authority, Santa Clarita Transit, and LADOT Commuter Express are also located within 0.5-mile of the site. Furthermore, the Project would comply with the CALGreen Code, implement various project design features to reduce energy usage, including Project Design Feature GHG-PDF-1 and would comply

[127] *As discussed above, SB 375 legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32.*

Table IV.D-8
Consistency with Applicable GHG Emissions Goals and Actions of City of LA Green New Deal

Action	Description	Consistency Analysis
Focus Area: Local Water		
Reduce potable water use per capita by 22.5% by 2025; and 25% by 2035; and maintain or reduce 2035 per capita water use through 2050	The City would build upon the success of Save the Drop program and develop additional water conservation campaigns. In addition, the City would continue to benchmark customer use and improve data gathering to identify effective programs	**Consistent.** While this action primarily applies to the City and LADWP, the Project would incorporate water conservation features to reduce water use. Water usage rates were calculated consistent with the requirements under City Ordinance No. 184,248, the 2013 California Plumbing Code, 2016 California Green Building Code (CALGreen), 2014 Los Angeles Plumbing Code, and 2017 Los Angeles Green Building Code and reflects approximately a 20 percent reduction in water usage as compared to the base demand.
Focus Area: Clean and Healthy Buildings		
All new buildings will be net zero carbon by 2030; and 100% of buildings will be net zero carbon by 2050	The City would perform a complete building electrification study and develop supporting programs. Financing would be expanded and improved to provide electrification existing energy efficiency and solar programs.	**Consistent.** While this action primarily applies to the City, the Project would be designed and operated to meet or exceed the applicable requirements of the state Green Building Standards Code and the City of Los Angeles Green Building Code. Furthermore, the Project would be subject to the 2019 Title 24 Standards which represent "challenging but achievable design and construction practices" that represent "a major step towards meeting the Zero Net Energy (ZNE) goal.[a]
Reduce building energy use per sf for all building types 22% by 2025; 34% by 2035; and 44% by 2050	The City would increase awareness of incentives and smart building energy management systems. An energy consumption report will be prepared to assess the energy-water nexus.	**Consistent.** While this action primarily applies to the City, the Project would be designed and operated to meet or exceed the applicable requirements of the state Green Building Standards Code and the City of Los Angeles Green Building Code.
Focus Area: Housing and Development		
Ensure 57% of new housing units are built within 1500 ft of transit by 2025; and 75% by 2035	The City would develop regulatory tools and strategies to encourage transit ridership and focus growth in housing near the North Hollywood Station, Van Nuys Station, Sepulveda Station, Reseda Station, and Sherman Way Station. New stations would also be added to the Purple Line from Downtown L.A. to UCLA. This action reduces vehicle emissions by facilitating access to transit which can reduce single occupancy vehicle trips and help	**Consistent.** While this action primarily applies to the City, the Project would concentrate new residential uses in close proximity to public transit opportunities (e.g., light rail and bus routes). The Project Site is well served by public transit, including the Culver City Bus and Santa Monica Big Blue Bus lines. In addition, the Project is located within 0.5-mile of a future Metro Purple Line station.

Table IV.D-8 (Continued)
Consistency with Applicable GHG Emissions Goals and Actions of City of LA Green New Deal

Action	Description	Consistency Analysis
	alleviate traffic congestion, and most importantly, reducing associated GHG emissions.	
Focus Area: Mobility and Public Transit		
Reduce VMT per capita by at least 13% by 2025; 39% by 2035; and 45% by 2050	The City would update the Transportation Demand Management (TDM) ordinance and develop first/last mile infrastructure improvements around transit stations. TDM strategies would also be implemented consistent with the West Side Mobility Plan to east congestion.	**No Conflict.** While this action primarily applies to the City, the Project would be located near mass transit stations to reduce vehicle trips. The Project would also promote a pedestrian-friendly community by placing residential uses within walking distance to other retail and entertainment uses. The Project Site is located in a HQTA as designated by the 2016–2040 and 2020–2045 RTP/SCS. The Project would also provide bicycle parking spaces in accordance with LAMC requirements for Project residents and visitors. As discussed above, the Project would result in a Total VMT per capita which is 46 percent lower when compared to SCAG's Los Angeles County VMT per capita included for Plan Year 2040 in the 2016–2040 RTP/SCS and 48 percent lower when compared to SCAG's Los Angeles County VMT per capita included for Plan Year 2045 in the 2020–2045 RTP/SCS.
Focus Area: Mobility and Public Transit		
Increase the percentage of electric and zero emission vehicles in the city to 25% by 2025; 80% by 2035; and 100% by 2050	The City would increase the electric vehicle ownership by providing rebates for used EVs and chargers as well as promote trade-in events for electric vehicles. The City would also increase the number of EV charging stations by pursuing public-private partnerships in developing charging stations, streamline permitting processes for EV charger installations and update building codes to simplify EV charging requirements.	**No Conflict.** The Project would support this policy since the Applicant would provide electric vehicle charging stations and electric vehicle supply wiring consistent with GHG-PDF-3 and 4.

[a] *CEC, 2019 Building Energy Efficiency Standards, Fact Sheet.*

Source: Eyestone Environmental, 2020.

with the City of Los Angeles Solid Waste Management Policy Plan, the RENEW LA Plan, and the Exclusive Franchise System Ordinance (Ordinance No. 182,986) in furtherance of

the aspirations included in the Sustainable City pLAn/L.A.'s Green New Deal with regard to energy-efficient buildings and waste and landfills. The Project would also provide secure short- and long-term bicycle storage areas for Project residents and guests.

Overall, the Project would not conflict with the Sustainable City pLAn/L.A.'s Green New Deal. Therefore, impacts pertaining to consistency with the Sustainable City pLAn/L.A.'s Green New Deal would be less than significant.

(iv) Post-2030 Analysis

Recent studies show that the State's existing and proposed regulatory framework will put the State on a pathway to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050 if additional appropriate reduction measures are adopted.[128] Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target.

Subsequent to the findings of these studies, SB 32 was passed on September 8, 2016, which requires that Statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. As discussed above, the new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries. The Project's design features advance these goals by reducing VMT, as described in more detail above, and other sustainable features that increase the use of electric vehicles, improve energy efficiency, and reduce water usage, including, but not limited to: (1) WaterSense-labeled plumbing fixtures and weather-based controller and drip irrigation systems to promote a reduction of indoor and outdoor water use; (2) Energy Star–labeled appliances; (3) water-efficient landscape design; (4) water-conserving plumbing fixtures; (5) insulated window glazing; (6) parking to support electric

[128] *Energy and Environmental Economics (E3). "Achieving Carbon Neutrality in California, PATHWAYS Scenarios Developed for the California Air Resources Board" (October 2020) Mahone, Amber. The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed long-term scenarios that explore the potential pace at which emission reductions can be achieved, as well as the mix of technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. The model encompasses the entire California economy with detailed representations of the buildings, industry, transportation and electricity sectors.*

vehicles, 10% with charging equipment and 30% EV-ready (i.e., prewired for future chargers); (7) reserved area for future solar PV panel on roof plus conduit for wiring; (8) landscaped roof terraces (aka "green roof"); and (9) natural gas fireplaces limited to common areas and the top floor residential dwelling units.

The emissions modeling in the 2017 Update has projected 2030 statewide emissions which take into account known commitments (reduction measures) such as SB 375, SB 350 and other measures. The emissions inventory identified an emissions gap, meaning that emissions reductions due to known commitments do not decline fast enough to achieve the 2030 target. In order to fill this gap, the 2017 Update assumed a scenario in which cap-and-trade would deliver the reductions necessary to achieve the 2030 emissions target. Although the Project is consistent with the 2017 Update, additional measures to achieve the 2030 targets and beyond are outside of the Project's control. Therefore, any evaluation of post-2030 Project emission would be speculative.

Executive Order S-3-05 establishes a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. This goal, however, has not been codified. That being said, studies have shown that, in order to meet the 2050 target, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its 2008 Climate Change Scoping Plan, CARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail."[129]

Although the Project's emissions level in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the State's achievement of that goal and it is reasonable to expect the Project's net emissions level (367 metric tons of CO_2e per year) to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur. Stated differently, the Project's total emissions at build-out presented in Table IV.D-10 on page IV.D-73 in the analysis below, represents the maximum emissions inventory for the Project as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project is consistent with the Executive Order's horizon-year (2050) goal. Further, the Project's consistency with SCAG's 2016–2040 and 2020–2045 RTP/SCS demonstrates that the Project will be consistent with the post-2030 GHG reduction goals of 19-percent by 2035.

[129] *CARB, Climate Change Scoping Plan: A Framework for Change, December 2008, p. 117.*

The Project is the type of land use development that is encouraged by the 2016–2040 and 2020–2045 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the State's long-term climate policies. As discussed above, the Project's daily Total Project VMT per capita is below the overall SCAG's Los Angeles County's daily Total VMT per capita for the 2045 Plan Year included in the 2020–2045 RTP/SCS. This reduction in VMT supports the goals of the 2016–2040 and 2020–2045 RTP/SCS with an estimated 19-percent decrease in per capita GHG emissions from passenger vehicles by 2035. On October 30, 2020, CARB certified the 2020–2045 RTP/SCS to meet the region's GHG emissions reduction targets consistent with SB 375.[130] As discussed above, the Project's VMT per capita would be 46 and 48 percent below the 2016–2040 RTP/SCS 2040 Plan Year for Los Angeles County and 2020–2045 RTP/SCS 2045 Plan Year for Los Angeles County respectively. This reduction would meet SB 375 GHG reduction targets. By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with State climate targets for 2030 and beyond. An additional study by the State's leading modeler shows that the Project's VMT reductions are consistent with decarbonization and technology deployment scenarios assessed as sufficient to achieve at least an 80-percent reduction in GHG emissions by 2045.[131] Across all the scenarios, the study assumes "a 17% reduction in per capita LDV [light-duty vehicle] VMT relative to 2020 by 2045."[132] As described above, the Project would achieve a per capita VMT reduction of 46 and 48 percent below the 2016–2040 RTP/SCS 2040 Plan Year for Los Angeles County and 2020–2045 RTP/SCS 2045 Plan Year for Los Angeles County, respectively, far exceeding the VMT reduction assumed in the study.

For the reasons described above, the Project's post-2030 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets and Executive Orders S-3-05 and B-30-15.

(v) Conclusion

The above plan consistency analysis above demonstrates that the Project does not conflict with the plans, policies, regulations, and GHG reduction actions/strategies outlined in applicable GHG reduction plans and policies. Therefore, impacts related to regulatory consistency would be less than significant.

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[130] *California Air Resources Board. Executive Order G-20-239. October 30, 2020.*

[131] *Energy and Environmental Economics (E3), "Achieving Carbon Neutrality in California—PATHWAYS Scenarios Developed for the California Air Resources Board" (Amber Mahone, October 2020), at p. 3.*

[132] *Id. at 39.*

(b) Project Emissions

As discussed above, Section 15064.4 of the CEQA guidelines recommends quantification of a Project's GHG emissions. However, the quantification is provided for informational purposes only and Project GHG emissions are not evaluated against any numeric threshold, as compliance with a GHG emissions reduction plan renders a project's potential impacts less than significant. In support of the above regulatory consistency analysis which describes the Project's compliance with or exceedance of performance-based standards included in the regulations and policies outlined in the applicable portions of the 2008 Climate Change Scoping Plan and subsequent updates, the 2016–2040 and 2020–2045 RTP/SCS, and the Sustainable City pLAn/L.A.'s Green New Deal, quantitative calculations are provided below.

The Project would result in direct and indirect GHG emissions generated by different types of emissions sources, including:

- Construction: emissions associated with demolition of the existing buildings and surface parking areas, shoring, excavation, grading, and construction-related equipment and vehicular activity;
- Area source: emissions associated with landscaping equipment and consumer products;
- Energy source (building operations): emissions associated with space heating and cooling, water heating, energy consumption, and lighting;
- Mobile source: emissions associated with vehicles accessing the Project Site;
- Stationary source: emissions associated with stationary equipment (e.g., emergency generators);
- Solid Waste: emissions associated with the decomposition of the waste, which generates methane based on the total amount of degradable organic carbon; and
- Water/Wastewater: emissions associated with energy used to pump, convey, deliver, and treat water.

The Project would generate an incremental contribution to and cumulative increase in GHG emissions. A specific discussion regarding potential GHG emissions associated with the construction and operational phases of the Project is provided below.

(i) Construction

As described in Section II, Project Description, of this Draft EIR, construction of the Project would commence with demolition of the existing buildings. This phase would be followed by grading and excavation for the subterranean parking levels. Building foundations would then be laid, followed by building construction, paving/concrete installation, including for the realigned portion of Bellwood Avenue, and landscape installation. The Project construction is assumed to begin in 2021, occur over approximately 34 months, and complete in 2023. The construction equipment and truck fleet mix is anticipated to emit less pollution in future years due to more stringent emissions control regulations. The estimated quantity of excavation expected for the subterranean parking is approximately 74,800 cubic yards of export material (e.g., concrete and asphalt surfaces) and soil that would be hauled from the Project Site during the demolition and excavation phase. The emission of GHGs associated with construction of the Project were calculated for each year of construction activity. A summary of GHG emissions for each year of construction is presented in Table IV.D-9 on page IV.D-72.

As presented in Table IV.D-9, construction of the Project is estimated to generate a total of 2,841 $MTCO_2e$. As recommended by the SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate that can be added to the Project's operational emissions) in order to determine the Project's annual GHG emissions inventory.[133] This results in annual Project construction emissions of 95 $MTCO_2e$. A complete listing of the construction equipment by on-site and off-site activities, duration, and emissions estimation model input assumptions used in this analysis is included within the emissions calculation worksheets that are provided in Appendix C of this Draft EIR.

(ii) Operation

<u>Area Source Emissions</u>

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes landscape maintenance equipment and consumer products. As previously discussed, the Project Site would include limited use of natural-gas fireplaces to common areas and the top floor residential dwelling units, which would also contribute to area source emissions. When accounting for removal of existing residential uses, the Project would result in a net decrease in area source GHG emissions. As shown in Table IV.D-10 on page IV.D-73, the Project, at full buildout, is expected to result in a net

[133] *SCAQMD Governing Board Agenda Item 31, December 5, 2008.*

Table IV.D-9
Construction-Related Emissions
($MTCO_2e$)

Year	$MTCO_2e$[a]
2021	1,535
2022	750
2023	556
Total	2,841
Amortized Over 30 Years	95

[a] *CO_2e was calculated using CalEEMod and the results are provided in Section 2.0 of the Construction CalEEMod output file within Appendix C of this Draft EIR.*

Source: Eyestone Environmental, 2020.

decrease of 17 $MTCO_2e$ per year from area sources. Please refer to Appendix C of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

Electricity and Natural Gas Generation Emissions

GHGs are emitted as a result of activities in buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; when this occurs in a building, it is a direct emission source associated with that building. GHGs are also emitted during the generation of electricity from fossil fuels. When electricity is used in a building, the electricity generation typically takes place off-site at the power plant; electricity use in a building generally causes emissions in an indirect manner.

Electricity and natural gas emissions were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the energy usage by applicable emissions factors chosen by the utility company. GHG emissions from electricity use are directly dependent on the electricity utility provider. In this case, GHG intensity factors for LADWP were selected in CalEEMod. The carbon intensity (lbs/MWh) for electricity generation was calculated for the Project buildout year based on LADWP projections; as LADWP projections are not calculated for every year, straight line interpolation was performed to estimate the LADWP carbon intensity factor for the Project buildout year based on Year 2015 and 2026 data.[134] LADWP's carbon intensity projections also take

[134] *LADWP, 2016 Power Integrated Resource Plan.*

Table IV.D-10
Annual GHG Emissions Summary (Project)[a]
(metric tons of carbon dioxide equivalent [$MTCO_2e$])

Scope	Existing Emissions	Project Without Reduction Features	Project with Reduction Features	Net Change (Project without Reduction Features – Baseline)	Net Change (Project with Reduction Features – Baseline)
Area[c]	25	8	8	(17)	(17)
Energy[d]	282	589	556	307	274
Mobile[e]	482	634	479	152	(3)
EV Chargers[f]	0	(33)	(33)	(33)	(33)
Stationary[g]	0	1	1	1	1
Solid Waste[h]	6	31	31	25	25
Water/Wastewater[i]	55	101	81	46	26
Construction	0	95	95	95	95
Total Emissions	**850**	**1,425**	**1,217**	**575**	**367**

Numbers may not add up exactly due to rounding.

[a] *CO_2e was calculated using CalEEMod and the results are provided in Section 2.0 of the Operation CalEEMod output file within Appendix C of this Draft EIR. Totals may not add up due to rounding. Emissions for existing and Project scenarios are based on a 2023 buildout year.*

[b] *Certain GHG reduction measures and regulations discussed above in the consistency analysis are not readily quantifiable and were not included as part of the emissions inventory. In addition, some reduction measures are implemented over time such as RPS, LCFS and fuel economy standards. Although the Project accounted for RPS, LCFS and fuel economy standards at Project buildout year, emissions do not reflect increased standards for later years. Therefore, Project emissions presented are conservative and would be lower in future years.*

[c] *Area source emissions are from landscape equipment and limited number of natural gas-fueled fireplaces.*

[d] *Energy source emissions are based on CalEEMod default electricity and natural gas usage rates. Emissions from electricity generation only take into account carbon intensity at build out year and do not take into account decreasing carbon intensity in subsequent years required by SB 100 (RPS). However, it is recognized that the RPS would require utilities to supply 60 percent renewable energy by 2030.*

[e] *Emissions were calculated with CalEEMod which includes EMFAC2014 emission factors. EMFAC2014 does not take account for further reductions in GHG emission as the result of implementation of LCFS amendments. Mobile source emissions also do not account for increasing fuel economy standards for future years.*

[f] *Emissions were calculated consistent with the requirements of City codes for EV charging stations.*

[g] *Stationary source emissions are from an on-site emergency generator.*

[h] *Solid waste emissions are calculated based on CalEEMod default solid waste generation rates.*

[i] *Water/Wastewater emissions are calculated based on CalEEMod default water consumption rates. The CalEEMod estimate of water consumption is considered conservative compared to more current water demand rates used by LADWP, which are reflected in Section IV.K.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR.*

Source: Eyestone Environmental, 2020.

into account SB 350 RPS requirements for renewable energy. However, they conservatively do not account for SB 100 RPS requirements for renewable energy.

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building, such as in plug-in appliances. CalEEMod calculates energy use from systems covered by Title 24 (e.g., heating, ventilation, and air conditioning [HVAC] system, water heating system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources not covered by Title 24 or lighting.

CalEEMod electricity and natural gas usage rates are based on the CEC-sponsored California Commercial End-Use Survey (CEUS) and California Residential Appliance Saturation Survey (RASS) studies.[135] The data are specific for climate zones; therefore, Zone 11 was selected for the Project Site based on the ZIP Code tool. Since these studies are based on older buildings, CalEEMod provides adjustments to account for more stringent requirements under 2016 Title 24 building codes as well as previous iterations of Title 24 building codes promulgated subsequent to preparation of the 2008 Climate Change Scoping Plan. Since the 2008 Scoping Plan, Title 24 was updated in 2010 and 2013 to incorporate increasing energy efficiency standards. The 2013 Title 24 requirements would improve energy efficiency standards by 25 percent above the 2007 Title 24 requirements.[136]

As discussed above, the Project would be subject to the 2019 Title 24 standards. This analysis conservatively includes a 10-percent reduction in the CalEEMod calculated energy use to account for compliance with 2019 Title 24 standards. While the analysis accounts for current energy efficiency regulations, future and proposed regulations have not been taken into account. Such regulations include future iterations of Title 24 which will further increase energy efficiency and zero net energy (ZNE) requirements. It is expected that Project energy-related GHG Emissions would comply with the goals of AB 32 and SB 32.

The Project would implement a number of project design features that would reduce Project energy consumption. Specifically, GHG-PDF-1, which would require the Project to incorporate features to further reduce overall energy usage. In addition, GHG-PDF-2, limits the number of natural gas-fueled fireplaces; therefore, reducing GHG emissions resulting from natural gas combustion.

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[135] *CEC, Commercial End-Use Survey, March 2006, and California Residential Appliance Saturation Survey, October 2010.*

[136] *California Lighting Technology Center, University of California, Davis. What's New in the 2013 Code?, March 18, 2014.*

As shown in Table IV.D-10 on page IV.D-73, Project GHG emissions from electricity and natural gas usage would result in a total of 274 $MTCO_2e$ per year, which reflects a 15-percent reduction in electricity and natural gas emissions with implementation of GHG-PDF-1 and GHG-PDF-2.

Mobile Source Emissions

Mobile-source emissions were calculated using the SCAQMD-recommended CalEEMod emissions inventory model. CalEEMod calculates the emissions associated with on-road mobile sources associated with residents, employees, visitors, and delivery vehicles visiting the Project Site based on the number of daily trips generated and VMT.

Mobile source operational GHG emissions were calculated using CalEEMod, based on the Project VMT estimates provided by Gibson Transportation Consulting.[137] As discussed in Section IV.I, Transportation, of this Draft EIR, the LADOT VMT Calculator was used to calculate Project VMT and trip estimates based on the amount of building area and the number of residential units.

As discussed above, the Project design also includes characteristics that would further reduce trips and VMT as compared to a project without VMT reducing measures within the Air Basin as calculated within the LADOT VMT Calculator. The Project would develop new senior residential uses on a site that is within an HQTA and would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. The Project Site is located approximately 0.5-mile from a future Metro Purple Line rail station. In addition, the Project Site is served by Culver City Bus and Santa Monica Big Blue Bus lines, which are within 0.25-mile of the site. Antelope Valley Transit Authority, Santa Clarita Transit, Metro and LADOT Commuter Express are also located within 0.5-mile of the site. The increase in bicycle parking spaces provided on-site would further reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. Project design would also provide pedestrian access that minimizes barriers and links the Project Site with existing or planned external streets to encourage people to walk instead of drive. As discussed previously, the LADOT VMT Calculator takes into account VMT reducing features such as proximity to transit, as shown in Table IV.H-24 and Table IV.H-25 in Section IV.I, Transportation, of this Draft EIR.

It should be noted that the Project would result in a net decrease in vehicle trips when accounting for removal of existing residential uses. As shown in Table IV.D-10, Project GHG emissions from mobile sources would result in a net decrease of 3 $MTCO_2e$

[137] *Gibson Transportation Consulting, Transportation Assessment for Senior Residential Community at the Bellwood Project, February 2021, revised April 2021.*

per year, when accounting for existing uses. Please refer to Appendix C of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

The Project's GHG emissions inventory does not take into account future regulations to reduce VMT and vehicle GHG emissions. As discussed above, SB 375 requires CARB to adopt VMT reduction targets for the SCAG region every eight years. It is expected that future VMT reduction targets would be more stringent in order to meet AB 32 and SB 32 GHG reduction targets. In addition, fuel efficiency for vehicles is expected to increase in future years beyond the buildout year of (2023) under the CAFE standards, resulting in fewer Project-related mobile source GHG emissions. Also, Governor Newsom has issued an executive order to require all new passenger cars and trucks sold to be zero-emission vehicles by 2035.[138] Although specific details regarding future VMT and GHG reduction measures are not yet known, it is expected that Project mobile-source GHG emissions would comply with the goals of AB 32 and SB 32.

Stationary Source Emissions

Emissions related to stationary sources were calculated using the CalEEMod emissions inventory model. It is anticipated that the Project would include an emergency generator on-site. As shown in Table IV.D-10 on page IV.D-73, the Project scenario is expected to result in a total of 1 $MTCO_2e$ per year from stationary sources.

Solid Waste Generation Emissions

Emissions related to solid waste were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the waste generated by applicable emissions factors provided in Section 2.4 of USEPA's AP-42, Compilation of Air Pollutant Emission Factors. CalEEMod solid waste generation rates for each applicable land use were selected for this analysis. As shown in Table IV.D-10, Project GHG emissions from solid waste generation would result in a total of 25 $MTCO_2e$ per year which accounts for a 76-percent recycling/diversion rate.. This assumes a 76.4-percent waste diversion rate for both the Buildout with reducing measures and Buildout without reducing measures scenarios.

The Project's GHG emissions inventory does not take into account solid waste diversion rates and recycling legislation in future years anticipated beyond Project buildout (Year 2023). Such legislation includes AB 1826 which requires commercial uses to recycle a specific amount of organic waste. Although AB 1826 is currently enforced, specific details regarding waste diversion are not yet known and not accounted for in the Project's

[138] *State of California, Executive Order N-79-20, September 23, 2020.*

GHG emissions inventory. However, it is anticipated that AB 1826 would reduce the amount of solid waste sent to landfills and thereby reducing the Project's GHG emissions in future years.

Water Usage and Wastewater Generation Emissions

GHG emissions are related to the energy used to convey, treat, distribute water, and treat wastewater. Thus, these emissions are generally indirect emissions from the production of electricity to power these systems. Three processes are necessary to supply potable water; these include: (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, energy is used as the wastewater is treated and reused as reclaimed water.

Emissions related to water usage and wastewater generation were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the water usage by the applicable energy intensity factor[139] to determine the embodied energy necessary to supply potable water. GHG emissions are then calculated based on the amount of electricity consumed, multiplied by the GHG intensity factors for the utility provider. In this case, embodied energy for Southern California supplied water and GHG intensity factors for LADWP were selected in CalEEMod. Water usage rates were calculated consistent with the requirements under City of Los Angeles Ordinance No. 184,248, 2016 California Plumbing Code, 2019 CALGreen, 2017 Los Angeles Plumbing Code, and 2017 Los Angeles Green Building Code, and reflect an approximately 20-percent reduction as compared to the base demand.[140] Base water use demand is determined by the maximum allowable water use per plumbing fixture and fitting as required by the California Building Standards Code.

The Project's GHG emissions inventory does not take into account future water conservation measures. Although specific details are not yet known, it is anticipated that future water conservation measures would be more stringent in the future. Recently enacted legislation include Senate Bill 606 and Assembly Bill 1668, which serve as a roadmap to establish water conservation targets and reduce water usage beyond what is currently accounted for in the Project's GHG emissions inventory.[141]

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[139] *The intensity factor reflects the average pounds of CO_2e per megawatt generated by a utility company.*

[140] *Base water demand calculated according to City of LA Ordinance No. 184248.*

[141] *California Department of Water Resources. Fast Facts on the Water Conservation Legislation.*

As shown in Table IV.D-10 on page IV.D-73, Project GHG emissions from water/ wastewater usage would result in a total of 26 $MTCO_2e$ per year, which accounts for a 20-percent reduction in water/wastewater emissions, consistent with City Ordinance No. 184,248, as compared to the Project without water conservation features. Please refer to Appendix C of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

(iii) Combined Construction and Operational Impacts

As shown in Table IV.D-10, when taking into consideration implementation of relevant project design features, as well as the requirements set forth in the City of Los Angeles Green Building Code, and full implementation of current State mandates, the Project's GHG emissions for the Project in 2023 would result in 95 $MTCO_2e$ per year (amortized over 30 years) during construction. With removal of existing uses, the Project would result in an increase of 272 $MTCO_2e$ per year during operation of the Project. Project construction and operations would result in a combined total of 367 $MTCO_2e$ per year.

As discussed above, the Project's GHG emissions inventory does not take into account future regulations and legislation to reduce GHG emissions. Although specific details of future regulations are not yet known, the Project's GHG emissions are expected to be consistent with the goals of AB 32 in future years.

(c) Conclusion

In summary, the Project's location, land use characteristics, and design render it consistent with statewide and regional climate change mandates, plans, policies, and recommendations. More specifically, the plan consistency analysis provided above demonstrates that the Project complies with or exceeds the plans, policies, regulations and GHG reduction actions/strategies outlined in the 2008 Climate Change Scoping Plan and subsequent updates, the 2016–2040 and 2020–2045 RTP/SCS, the Sustainable City pLAn/L.A.'s Green New Deal, as well as the City's Green Building Code. As the Project would not conflict with relevant plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs, impacts related to regulatory consistency would be less than significant. **Therefore, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHGs. Furthermore, because the Project is consistent and does not conflict with these plans, policies, and regulations, the Project's incremental increase in GHG emissions as described above would not result in a significant impact on the environment. Therefore, Project-specific impacts with regard to climate change would be less than significant.**

(2) Mitigation Measures

Project-level impacts related to GHG emissions would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to GHG emissions were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

e. Cumulative Impacts

(1) Impact Analysis

As explained above, the analysis of a project's GHG emissions is inherently a cumulative impacts analysis because climate change is a global problem and the emissions from any single project alone would be negligible. Accordingly, the analysis above took into account the potential for the Project to contribute to the cumulative impact of global climate change. Table IV.D-10 on page IV.D-73 illustrates that implementation of the Project's regulatory requirements and project design features, including state mandates, would contribute to GHG reductions. These reductions support state goals for GHG emissions reduction.

The analysis shows that the Project is consistent with CARB's 2008 Climate Change Scoping Plan and subsequent updates, particularly its emphasis on the identification of emission reduction opportunities that promote economic growth while achieving greater energy efficiency and accelerating the transition to a low-carbon economy. The Project is also consistent with the 2016-2040 and 2020–2045 RTP/SCS' regulatory requirements to reduce regional GHG emissions from the land use and transportation sectors by 2020 and 2035. Furthermore, the Project would generally comply with the aspirations of the Sustainable City pLAn/L.A.'s Green New Deal, which includes specific targets related to housing and development, and mobility and transit. Given the Project's consistency with statewide, regional, and local plans adopted for the reduction of GHG emissions, it is concluded that the Project's incremental contribution to greenhouse gas emissions and their effects on climate change would not be cumulatively considerable. **For these reasons, the Project's cumulative contribution to global climate change is less than significant.**

(2) Mitigation Measures

Cumulative impacts related to GHG emissions would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts related to GHG emissions were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

IV. Environmental Impact Analysis

E. Land Use and Planning

1. Introduction

This section of the Draft EIR analyzes the Project's potential impacts with regard to conflicts with applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. The Project's potential impacts related to the physical division of an established community was evaluated in the Initial Study prepared for the Project and included in Appendix A of this Draft EIR.

2. Environmental Setting

a. Regulatory Framework

(1) Regional

Regional land use plans that govern the project area include the Southern California Association of Governments' (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan (AQMP), which addresses the attainment of State and federal ambient air quality standards throughout the South Coast Air Basin. These plans are described below.

(a) Southern California Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy

SCAG's 2016–2040 RTP/SCS, adopted on April 7, 2016, presents a long-term transportation vision through the year 2040 for the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. The mission of the 2016–2040 RTP/SCS is to provide "leadership, vision and progress which promote economic growth, personal well-being, and livable communities for all Southern Californians." The 2016–2040 RTP/SCS places a greater emphasis on sustainability and integrated planning compared to previous versions of the plan, and identifies mobility, accessibility, sustainability, and high quality of life, as the principles most critical to the future of the region. As part of this approach, the 2016–2040 RTP/SCS establishes commitments to develop a Sustainable Communities Strategy to reduce per capita greenhouse gas (GHG) emissions through integrated transportation, land use, housing and

environmental planning in order to comply with SB 375, improve public health, and meet the National Ambient Air Quality Standards (NAAQS).

The 2016–2040 RTP/SCS also establishes High-Quality Transit Areas (HQTAs), which are described as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours. Local jurisdictions are encouraged to focus housing and employment growth within HQTAs. The Project Site is located within an HQTA as designated by the 2016–2040 RTP/SCS.[1,2]

On September 1, 2020, SCAG's Regional Council adopted an updated RTP/SCS known as the 2020–2045 RTP/SCS or Connect SoCal.[3] As with the 2016–2020 RTP/SCS, the purpose of the 2020–2045 RTP/SCS is to meet the mobility needs of the six-county SCAG region over the subject planning period through a roadmap identifying sensible ways to expand transportation options, improve air quality and bolster Southern California long-term economic viability.[4] On October 30, 2020, the California Air Resources Board (CARB) made the determination that the 2020–2045 RTP/SCS would meet the region's GHG reduction target. The goals and policies of the 2020–2045 RTP/SCS are similar to, and consistent with, those of the 2016–2040 RTP/SCS. As was the case under the prior RTP/SCS, the Project Site is located within an HQTA as designated by the 2020–2045 RTP/SCS.[5] The Project's consistency with applicable goals of the RTP/SCS adopted for the purpose of avoiding or mitigating an environmental effect is discussed in the impact analysis below. A detailed list of the goals of the RTP/SCS applicable to the Project Site is included in Table 1 of Appendix E of this Draft EIR along with a discussion of whether the Project conflicts or does not conflict with that particular goal.

(b) South Coast Air Quality Management District Air Quality Management Plan

SCAQMD was established in 1977 pursuant to the Lewis-Presley Air Quality Management Act. SCAQMD is responsible for developing plans for ensuring air quality in the South Coast Air Basin conforms with federal and State air pollution standards. In

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1 *SCAG, 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, adopted April 2016, Exhibit 5.1.*

2 *Los Angeles County Metropolitan Transportation Authority (Metro), High Quality Transit Areas—Southwest Quadrant map.*

3 *SCAG, News Release: SCAG Regional Council Formally Adopts Connect SoCal, September 3, 2020.*

4 *SCAG, News Release: SCAG Regional Council Formally Adopts Connect SoCal, September 3, 2020.*

5 *SCAG, 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy, adopted September 2020, Exhibit 3.4.*

conjunction with SCAG, SCAQMD has prepared the 2016 AQMP establishing a comprehensive regional air pollution control program including air pollution control strategies leading to the attainment of State and federal air quality standards in the South Coast Air Basin. Refer to Section IV.B, Air Quality, of this Draft EIR for an analysis of the Project's consistency with the AQMP.

(c) Los Angeles County Metropolitan Transportation Authority Congestion Management Program

The Congestion Management Program (CMP) was established statewide in 1990 to implement Proposition 111, tying appropriation of new gas tax revenues to congestion reduction efforts. CMP is managed at the countywide level and primarily uses an LOS performance metric, which is inconsistent with more recent state efforts to transition to VMT-based performance metrics. California Government Code Section 65088.3 allows counties to opt out of CMP requirements without penalty, if a majority of local jurisdictions representing a majority of a county's population formally adopt resolutions requesting to opt out of the program.

On June 20, 2018, Los Angeles County Metropolitan Transportation Authority (Metro) initiated a process to gauge the interest of local jurisdictions in opting out of State CMP requirements. On July 30, 2019, the Los Angeles City Council passed a resolution to opt out of the CMP program, and on August 28, 2019, Metro announced that the thresholds had been reached and the County of Los Angeles had opted to be exempt from CMP. As such, the provisions of CMP no longer apply to any of the 89 local jurisdictions in Los Angeles County. Accordingly, CMP analysis is no longer included in City of Los Angeles environmental documents.

(2) Local

At the local level, several plans, policies, and regulatory documents guide development within the City of Los Angeles (City), including the City of Los Angeles General Plan (General Plan) and Los Angeles Municipal Code (LAMC), which govern land use through specific development and design standards and building and safety codes. The City's West Los Angeles Community Plan (Community Plan) constitutes the local land use policy standard for the Project Site and Community Plan area. In addition, the Project is subject to the Citywide Design Guidelines. Applicable plans and associated regulatory documents/ requirements are described below.

(a) City of Los Angeles General Plan

State law requires that every city and county prepare and adopt a General Plan, which is a comprehensive long-term document that provides principles, policies, and

objectives to guide future development. A number of these principles, policies, and objectives serve to mitigate environmental effects.

The City's General Plan is a policy document originally adopted in 1974 that serves as a comprehensive, long-term plan for future development. The General Plan sets forth goals, objectives, and programs to guide land use policies and to meet the existing and future needs of the community. The General Plan consists of a series of documents which includes the seven State-mandated elements: Land Use, Circulation, Noise, Safety, Housing, Open Space, and Conservation. In addition, the City's General Plan includes elements addressing Air Quality, Historic Preservation and Cultural Resources, Infrastructure Systems, Public Facilities and Services, and Health and Wellness, as well as the City of Los Angeles General Plan Framework Element (Framework Element). The Land Use Element is composed of 35 area plans known as Community Plans that guide land use at the community level. The Project Site is located within the boundaries of the West Los Angeles Community Plan area.

(i) Los Angeles General Plan Framework Element

The Framework Element, adopted in December 1996 and readopted in August 2001, sets forth general guidance regarding land use issues for the City and defines citywide policies regarding land use that influence the Community Plans and most of the City's General Plan Elements. Specifically, the Framework Element defines Citywide policies for land use, housing, urban form/neighborhood design, open space/conservation, economic development, transportation, and infrastructure and public services.

(1) Land Use Chapter

The Land Use Chapter of the Framework Element provides objectives to support the viability of the City's residential neighborhoods and commercial and industrial districts and to encourage sustainable growth in appropriate locations. The Land Use Chapter establishes these land use categories, which are described by ranges of intensity/density, heights, and lists of typical uses. Neighborhood Districts, Community Centers, Regional Centers, Downtown Center, Mixed-Use Boulevards, and Industrial Districts. These land use categories are intended to serve as a guideline for the Community Plans and do not convey land use entitlements or affect existing zoning for properties in the City.[6] The

[6] *As indicated in Chapter 1 of the Framework Element, it neither overrides nor supersedes the Community Plans. It guides the City's long-range growth and development policy, establishing citywide standards, goals, policies and objectives for citywide elements and the City's Community Plans. The Framework Element expressly states that it "is not sufficiently detailed to impact requests for entitlements on individual parcels. Community Plans will be more specific and will be the major documents to be looked to for consistency with the General Plan for land use entitlements." The Executive Summary of the*

(Footnote continued on next page)

Project Site is not identified as being located within any of these categories (it is located just west of the Century City Regional Center).[7]

(2) Housing Chapter

The overarching goal of the Housing Chapter of the Framework Element is to define the distribution of housing opportunities by type and cost for all residents of the City. The Housing Chapter provides the following policies to achieve this goal:

- Concentrating opportunities for new development in the City's Neighborhood Districts and in Community Centers, Regional Centers, and the Downtown Center, as well as along primary transit corridors/boulevards;
- Providing development opportunities along boulevards located near existing or planned major transit facilities and areas characterized by low-intensity or marginally viable commercial uses with structures that integrate commercial, housing, and/or public service uses; and
- Focusing mixed uses around urban transit stations, while protecting and preserving surrounding low-density neighborhoods from the encroachment of incompatible land uses.

(3) Urban Form and Neighborhood Design Chapter

The Urban Form and Neighborhood Design Chapter of the Framework Element establishes a goal of creating a livable City for existing and future residents. This chapter defines "urban form" as the City's general pattern of building height, development intensity, activity centers, focal elements, and structural elements, such as natural features, transportation corridors, open space, and public facilities. "Neighborhood design" is defined as the physical character of neighborhoods and communities. The Framework Element does not directly address the design of individual neighborhoods or communities, but embodies general neighborhood design and implementation programs that guide local planning efforts and lay a foundation for updating the community plans. The Urban Form and Neighborhood Design Chapter encourages growth in areas that have a sufficient base of both commercial and residential development to support transit service.

Framework Element similarly states that it "does not convey or affect entitlements for any property." Precise determinations are made in the Community Plans.

[7] *City of Los Angeles, City of Los Angeles General Plan Framework, Land Use Element, Figure 3-3, Long Range Land Use Diagram for West/Coastal Los Angeles, February 19, 2003.*

(4) Open Space and Conservation Chapter

The Open Space and Conservation Chapter of the Framework Element contains goals, objectives, and policies to guide the provision, management, and conservation of public open space resources, address the outdoor recreational needs of the City's residents, and guide amendments to the General Plan Open Space Element and Conservation Element. This chapter also includes policies to address the City's open space issues. Specifically, this chapter contains open space goals, objectives, and policies regarding resource conservation and management, outdoor recreation, public safety, community stability, and resources development.

(5) Economic Development Chapter

The Economic Development Chapter of the Framework Element seeks to identify physical locations necessary to attract continued economic development and investment to targeted districts and centers. Goals, objectives, and policies focus on retaining commercial uses, particularly within walking distance of residential areas, and promoting business opportunities in areas where growth can be accommodated without encroaching on residential neighborhoods.

(6) Transportation Chapter

As an update to the prior Transportation Element of the General Plan, the City Council initially adopted Mobility Plan 2035 in August 2015. Mobility Plan 2035 was readopted in January 2016 and again in September 2016.[8] Accordingly, the goals of the Transportation Chapter of the Framework Element are now implemented through Mobility Plan 2035, which is discussed further below.

(7) Infrastructure and Public Services Chapter

The Infrastructure and Public Services Chapter of the Framework Element addresses infrastructure and public service systems, including wastewater, stormwater, water supply, solid waste, police, fire, libraries, parks, power, schools, telecommunications, street lighting, and urban forest. For each of the public services and infrastructure systems, basic policies call for monitoring service demands and forecasting the future need for improvements, maintaining an adequate system/service to support the needs of population and employment growth, and implementing techniques that reduce demands on utility infrastructure or services. Generally, these techniques encompass a variety of conservation programs (e.g., reduced use of natural resources, increased site permeability,

[8] *Los Angeles Department of City Planning, Mobility Plan 2035: An Element of the General Plan, last adopted by City Council on September 7, 2016.*

watershed management, and others). Attention is also placed on the establishment of procedures for the maintenance and/or restoration of service after emergencies, including earthquakes.

The Project's consistency with applicable goals, objectives, and policies in the Framework Element adopted for the purpose of avoiding or mitigating an environmental effect is discussed in the impact analysis below. A detailed list of the goals, objectives, and policies of the Framework Element applicable to the Project Site is included in Table 2 of Appendix E of this Draft EIR along with a discussion of whether the Project conflicts or does not conflict with that particular goal, objective, or policy.

(ii) Mobility Plan 2035

The overarching goal of Mobility Plan 2035 is to achieve a transportation system that balances the needs of all road users. As an update to the City's General Plan Transportation Element, Mobility Plan 2035 incorporates "complete streets" principles. In 2008, the California State Legislature adopted Assembly Bill (AB) 1358, the Complete Streets Act, which requires local jurisdictions to "plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban or urban context." Mobility Plan 2035 includes the following five main goals that define the City's high-level mobility priorities:[9]

- Safety First;
- World Class Infrastructure;
- Access for All Angelenos;
- Collaboration, Communication, and Informed Choices; and
- Clean Environments and Healthy Communities.

Each of the goals contains objectives and policies to support the achievement of those goals. The Project's consistency with applicable policies in the Mobility Plan adopted for the purpose of avoiding or mitigating an environmental effect is discussed in the impact analysis below. A detailed list of the goals, objectives, and policies of Mobility Plan 2035 applicable to the Project Site is included in Table 3 of Appendix E of this Draft EIR along

[9] *City of Los Angeles Department of City Planning, Mobility Plan 2035: An element of the General Plan, last adopted by City Council on September 7, 2016.*

with a discussion of whether the Project does or does not conflict with that particular goal, objective, or policy.

(iii) Los Angeles General Plan Housing Element

Adopted in December 2013, the Housing Element 2013–2021 identifies four primary goals and associated objectives, policies and programs. The goals are as follows:

- A City where housing production and preservation result in an adequate supply of ownership and rental housing that is safe, healthy, sanitary, and affordable to people of all income levels, races, ages, and suitable for their various needs;
- A City in which housing helps to create safe, livable and sustainable neighborhoods;
- A City where there are housing opportunities for all without discrimination; and
- A City committed to ending and preventing homelessness.

The Project's consistency with the applicable goals, objectives, and policies set forth in the Housing Element adopted for the purpose of avoiding or mitigating an environmental effect is discussed in the impact analysis below. A detailed list of the goals, objectives, and policies of the Housing Element applicable to the Project Site is included in Table 4 of Appendix E of this Draft EIR along with a discussion of whether the Project conflicts or does not conflict with that particular objective or policy.

(iv) Los Angeles General Plan Conservation Element

The Conservation Element primarily addresses preservation, conservation, protection and enhancement of the City's natural resources. Section 5 of the Conservation Element recognizes the City's responsibility for identifying and protecting its cultural and historical heritage. The Conservation Element establishes an objective to protect important cultural and historical sites and resources for historical, cultural, research, and community educational purposes and a corresponding policy to continue to protect historic and cultural sites and/or resources potentially affected by proposed land development, demolition, or property modification activities.[10]

The Project's consistency with applicable policies set forth in the Conservation Element adopted for the purpose of avoiding or mitigating an environmental effect is discussed in the impact analysis below.

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[10] *City of Los Angeles Conservation Element of the General Plan, adopted September 26, 2001, p. II-9.*

(b) West Los Angeles Community Plan

The land use policies and standards of the Framework Element and the General Plan elements are implemented at the local level through the community planning process. Community plans are oriented toward specific geographic areas of the City, defining locally the Framework Element's more general policies and programs and are intended to promote an arrangement of land uses, streets, and services that will encourage and contribute to the economic, social, and physical health, safety, welfare, and convenience of the people who live and work in the community. Goals, objectives, policies, and programs are created to meet the existing and future needs of the community. The Project Site is located within the West Los Angeles Community Plan area. Adopted on July 27, 1999, the Community Plan sets forth goals and objectives to maintain the community's distinctive character by:

- Preserving and enhancing the positive characteristics of existing residential neighborhoods while providing a variety of compatible housing opportunities.
- Improving the function, design and economic vitality of commercial and industrial areas.
- Preserving and enhancing the positive characteristics of existing uses which provide the foundation for community identity, such as scale, height, bulk, setbacks and appearance.
- Maximizing development opportunities around future transit systems while minimizing any adverse impacts.
- Preserving and strengthening commercial and industrial developments to provide a diverse job-producing economic base; and through design guidelines and physical improvements, enhance the appearance of these areas.

As shown in Figure IV.E-1 on page IV.E-10, the Community Plan's land use designation for the Project Site is Neighborhood Commercial. According to the Community Plan, Neighborhood Commercial uses include one to four story neighborhood-serving retail and office uses with a mix of residential units.[11] The Neighborhood Commercial designation corresponds to the City's C1 (Limited Commercial), C1.5 (Limited Commercial), C2 (Commercial), C4 (Commercial), RAS3 (Residential/Accessory Services), RAS4

[11] *City of Los Angeles, West Los Angeles Community Plan, adopted July 27, 1999.*

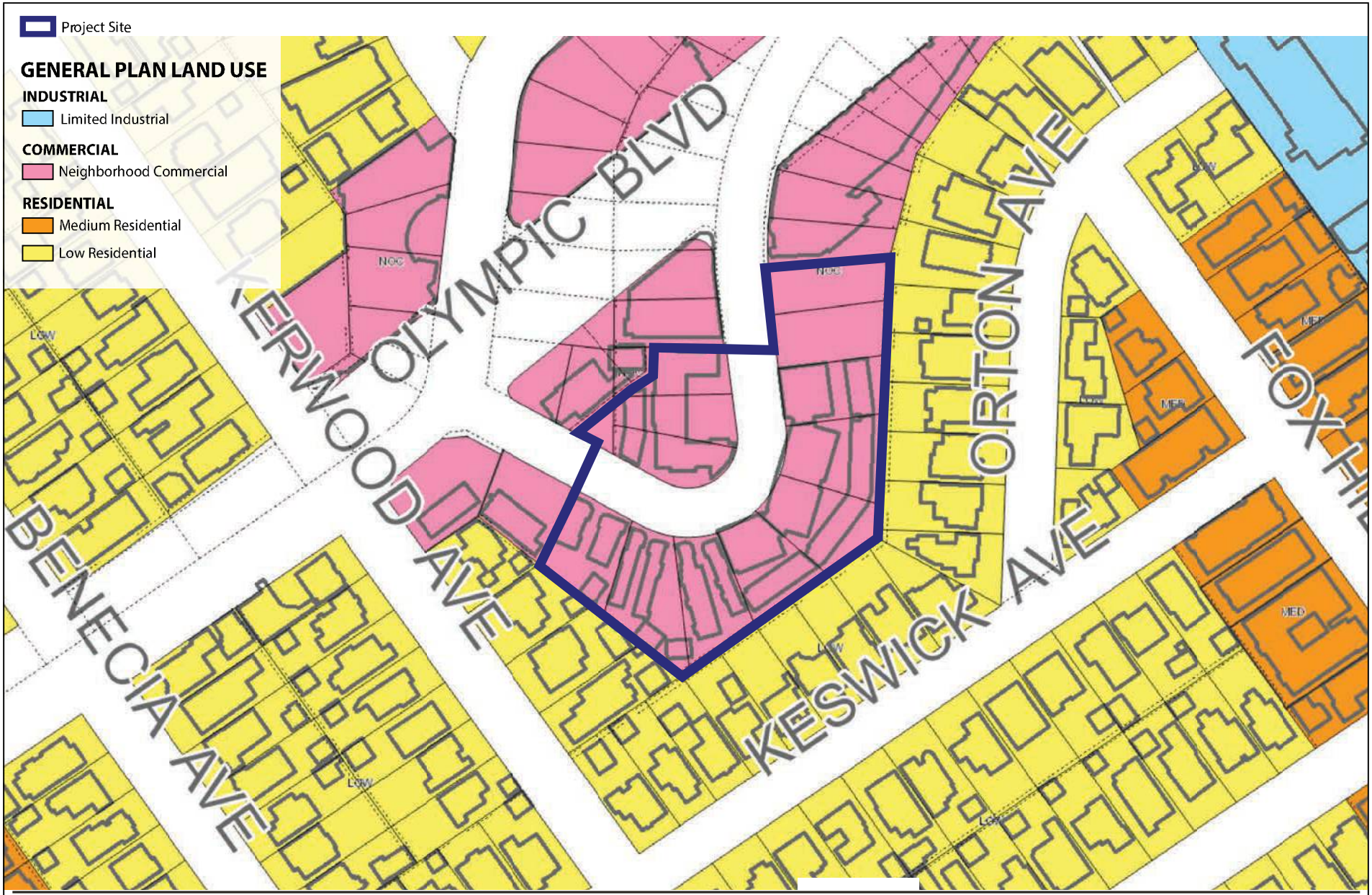

Figure IV.E-1
Land Use Designation on the Project Site

Source: City Los Angeles ZIMAS; Eyestone Environmental, 2019.

(Residential/Accessory Services), and P (Automobile Parking) zones in the LAMC, as well as zones referenced in the LAMC as permitted by such zones.[12]

The Project's consistency with applicable goals, objectives, and policies in the Community Plan adopted for the purpose of avoiding or mitigating an environmental impact is discussed in the impact analysis below. A detailed list of the goals, objectives and policies of the Community Plan applicable to the Project Site is included in Table 5 of Appendix E of this Draft EIR along with a discussion of whether the Project conflicts or does not conflict with that particular goal, objective, or policy.

(c) Los Angeles Municipal Code (LAMC)

The City of Los Angeles Zoning Code (Chapter 1 of the LAMC) regulates development through zoning designations and development standards. As shown in Figure IV.E-2 on page IV.E-12, the Project Site is zoned by the LAMC as R3-1-O (Multiple Residential, Height District 1, Oil Drilling)[13] and C2-1VL-O (Commercial, Height 1VL, Oil Drilling).[14] The R3 zone permits a wide variety of residential uses, including group dwellings, multiple dwellings, apartment houses, boarding houses, rooming houses, accessory uses and home occupations, senior independent housing, and assisted living care housing. The C2 zone permits a wide variety of uses, including, but not limited to, eldercare facilities, multiple dwellings, various retail and restaurant spaces, auditoriums, automotive fueling and service stations, churches, drive-in businesses, hospitals, sanitariums, clinics, and schools. Height District 1 within the R3 Zone limits building heights to 45 feet and the floor-area ratio (FAR) to 3:1. Height District 1VL within the C2 Zone limits building heights to 45 feet and three stories (except that there is no restriction on the number of stories for buildings used entirely for residential purposes) and the FAR to 1.5:1. The "O" designation indicates the Project Site is located within an Oil Drilling District where the drilling of oil wells or the production from the wells of oil, gases, or other hydrocarbon substances is permitted.

As discussed in detail in Section IV.A. Aesthetics of this Draft EIR, the City has identified areas that meet the definition of a Transit Priority Area (TPA) as specified in SB 743. Specifically, City of Los Angeles Department of City Planning Zoning Information (ZI) File ZI No. 2452 provides instruction concerning the definition of projects within a TPA and states that aesthetic and parking impacts shall not be considered an impact for infill

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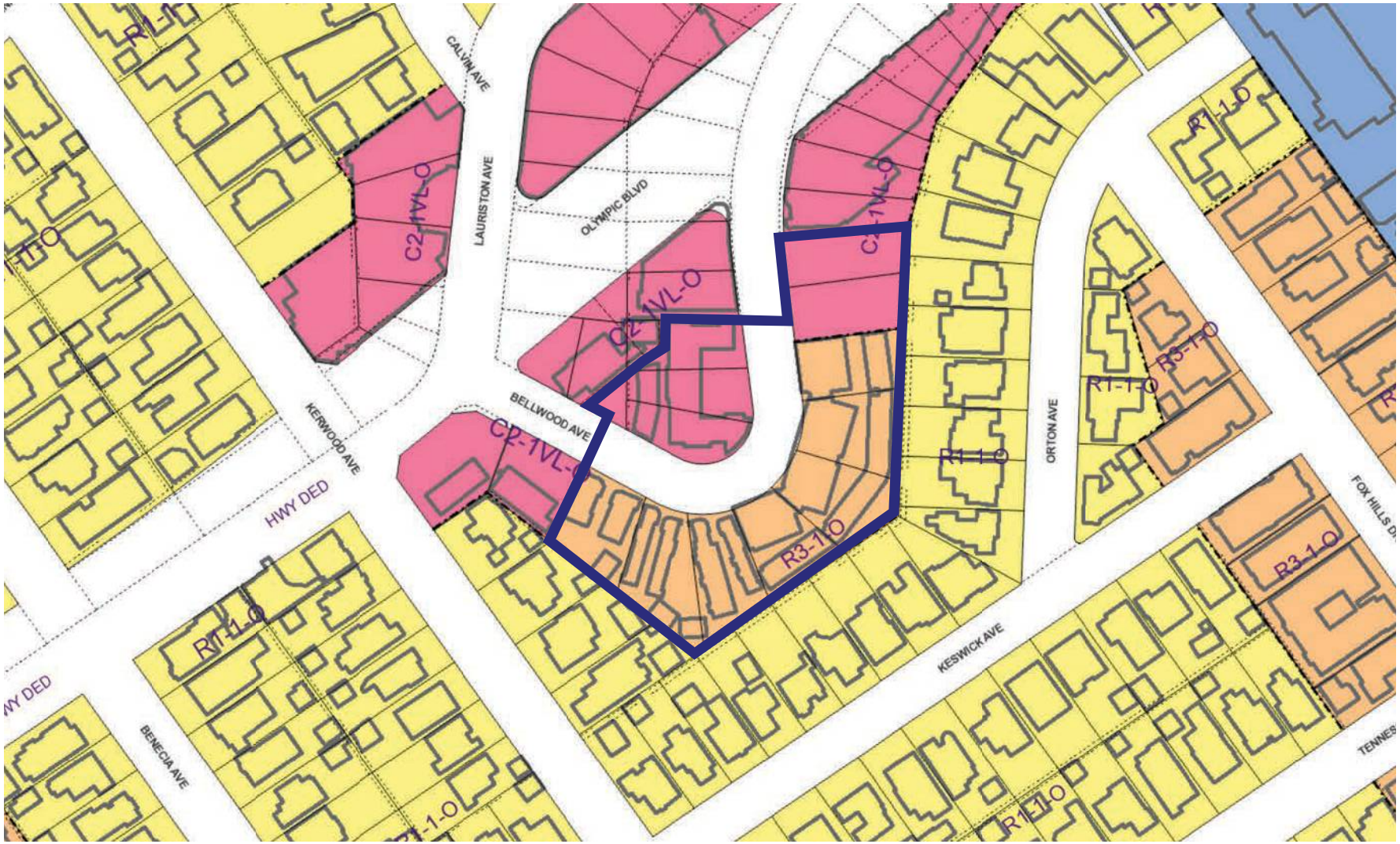
[12] *City of Los Angeles, West Los Angeles Community Plan, General Plan Land Use Map, footnote 8. Per LAMC section 12.14.A.4, uses permitted in the C2 zone include uses permitted in the C1.5 zone, which includes the C1 and R3 zone uses per LAMC sections 12.13.5.A.1 and 12.13.A.*

[13] *The R3 zoning applies to Lots 29-35 of Block 13 of Tract 7260.*

[14] *The C2 zoning applies to Lots 36-37 of Block 13 of Tract 7260 and Lots 10-13 of Block 14 of Tract 7260.*



GENERALIZED ZONING

C2 | R1 | Project Site
R3 | CCS

Figure IV.E-2
Zoning Designations on the Project Site

Source: City Los Angeles ZIMAS; Eyestone Environmental, 2019.

projects within TPAs pursuant to CEQA .[15] The City's Zone Information and Map Access System (ZIMAS) identifies portions of the Project Site (specifically APNs 4315-018-032, -033, -034, and -048) as located within a TPA as defined by City ZI File No. 2452.[16,]

(d) West Los Angeles Transportation Improvement and Mitigation Specific Plan

The Project Site is also located within the boundaries of the West Los Angeles Transportation Improvement and Mitigation Specific Plan (WLA TIMP), adopted March 8, 1997 and amended June 28, 2019. The WLA TIMP is a transportation Specific Plan for a broad area between the Hollywood Hills to the north, the City of Santa Monica boundary to the west, the City of Culver City boundary to the south, and the City of Beverly Hills boundary to the east. The WLA TIMP is intended to regulate the phased development of land uses, insofar as the transportation infrastructure can accommodate such uses, and promote the development of coordinated and comprehensive transportation plans and programs with other jurisdictions and public agencies.

The WLA TIMP is intended to provide a mechanism to fund specific transportation improvements that would mitigate transportation impacts generated by new development. A Transportation Impact Assessment (TIA) process and fee has been established for new development with residential land uses. However, the WLA TIMP exempts eldercare facilities from the TIA fee.[17] The plan ensures that the public transportation facilities that will be constructed with these funds will significantly benefit the contributor.

Projects subject to the WLA TIMP that generate over 100 P.M. peak-hour vehicle trips may also be required to implement a transportation demand management (TDM) program satisfactory to the City of Los Angeles Department of Transportation (LADOT). This requirement is intended to promote or increase work-related ridesharing and transit use as well as bicycling to reduce peak hour vehicle trips. The WLA TIMP is also intended to promote area-wide transit enhancement through the addition of transit lines, shuttles, transit centers and other such facilities that expedite transit flow. Finally, the WLA TIMP is intended to promote neighborhood protection programs to minimize intrusion of commuter traffic through residential neighborhoods.

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[15] *City of Los Angeles Department of City Planning, Zoning Information File ZA No. 2452, Transit Priority Areas (TPAs)/Exemptions to Aesthetics and Parking Within TPAs Pursuant to CEQA,*

[16] *City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Reports for APNs 4315-018-029, -030, -031, -032, -033, -034, and -048, http://zimas.lacity.org/, accessed February 17, 2021.*

[17] *City of Los Angeles Municipal Code, Section 19.19.D.1.j.*

The Project would not be subject to WLA TIMP requirements, including payment of TIA fees or implementation of a TDM program, because the Project would be an eldercare facility project.

(e) Citywide Design Guidelines

The Citywide Design Guidelines serve to implement the General Plan Framework Element's urban design principles and are intended to be used by City of Los Angeles Department of City Planning staff, developers, architects, engineers, and community members in evaluating project applications, along with relevant policies from the Framework Element and Community Plans. By offering more direction for proceeding with the design of a project, the Citywide Design Guidelines illustrate options, solutions, and techniques to achieve the goal of excellence in new design. The Citywide Design Guidelines, which were adopted by the City Planning Commission in June 2011 and updated in October 2019, are intended as performance goals and not zoning regulations or development standards and, therefore, do not supersede regulations in the LAMC. The Citywide Design Guidelines are intended to "carry out the common design objectives that maintain neighborhood form and character while promoting quality design and creative infill development solutions" and are organized around Pedestrian-First Design, 360 Degree Design, and Climate-Adapted Design. The Citywide Design Guidelines incorporate the goals of the previous Walkability Checklist.

(f) Other City of Los Angeles Environmental Policies, Ordinances, and Plans

The City of Los Angeles has adopted various environmental plans, policies, and ordinances, such as the Los Angeles Green Building Code (Chapter IX, Article 9, of the LAMC), Public Recreation Plan, Los Angeles Department of Water and Power (LADWP) 2015 Urban Water Management Plan (UWMP), Sustainable City pLAn/L.A.'s Green New Deal, and the Recovering Energy, Natural Resources and Economic Benefit from Waste for Los Angeles (RENEW LA) Plan. These plans, policies, and ordinances are discussed in their respective environmental topic sections throughout Section IV, Environmental Impact Analysis, of this Draft EIR.

b. Existing Conditions

(1) Project Site

The 2.22-acre (96,792 square feet) Project Site[18] is located at 10328–10384 and 10341–10381 Bellwood Avenue within the West Los Angeles Community Plan area of the

[18] *The lot area following the proposed merger and subdivision, including the vacated and realigned portion of Bellwood Avenue and excluding an anticipated five-foot right-of-way dedication on a portion of* *(Footnote continued on next page)*

City. More specifically, the Project Site includes seven parcels that form an irregularly shaped site along both sides of Bellwood Avenue which bifurcates the Project Site in a U-shape with both ends connecting to Olympic Boulevard. The Project Site is currently developed with three multi-family residential developments totaling 43,939 square feet, including 112 units in: a 13-unit building located at 10341-10381 Bellwood Avenue; seven two-story buildings with a total of 82 units located at 10328-10366 Bellwood Avenue; and six bungalow court buildings located at 10368-10384 Bellwood Avenue with a total of 17 units. The Project Site also contains surface parking and small landscaped areas (including 66 non-protected trees and 8 street trees) and has surface topography that generally slopes down from south to north with a grade difference of up to 42 feet.

Direct vehicular access to the Project Site is provided from driveways off Bellwood Avenue, with local access provided by Olympic Boulevard, Beverly Glen Boulevard, and Pico Boulevard, and regional access provided by Santa Monica Boulevard (CA-2), the Santa Monica Freeway (I-10), and the San Diego Freeway (I-405), all of which are accessible within 2 miles of the Project Site. Public transit service in the vicinity of the Project Site is currently provided by Metro, Culver City Bus, Santa Monica Big Blue Bus, Antelope Valley Transit Authority, Santa Clarita Transit, and LADOT Commuter Express. Transit lines within 0.25 mile of the Project Site include Culver City Bus Route 3 and Santa Monica Big Blue Bus Route 5. In addition, Section 2 of Metro's Purple Line Extension Transit Project is currently under construction in the vicinity of the Project Site. This section of Metro's Purple Line Extension includes a subway station at Constellation Boulevard and Avenue of the Stars, approximately 0.5 mile northeast of the Project Site.

As discussed previously, the Project Site is currently designated as Neighborhood Commercial by the Community Plan, with two of the Project Site lots south of Bellwood Avenue and four of the Project Site lots north of Bellwood Avenue zoned C2-1VL-0 (Commercial, Height District 1 VL, Oil Drilling),[19] and seven of the nine Project Site lots south of Bellwood Avenue zoned R3-1-0 (Multiple Residential, Height District 1, Oil Drilling).[20,21] The Project Site is also located within the WLA TIMP Specific Plan area.[22]

Bellwood Avenue, would be 93,422 square feet or 2.14 acres. The total lot area may vary depending on the ultimate configuration and designation of the realigned portion of Bellwood Avenue.

[19] *The C2 zoning applies to Lots 36-37 of Block 13 of Tract 7260 and Lots 10-13 of Block 14 of Tract 7260.*

[20] *The R3 zoning applies to Lots 29-35 of Block 13 of Tract 7260.*

[21] *City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Reports for APNs 4315-018-029, -030, -031, -032, -033, -034, and -048, http://zimas.lacity.org/, accessed February 17, 2021.*

[22] *City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Reports for APNs 4315-018-029, -030, -031, -032, -033, -034, and -048, http://zimas.lacity.org/, accessed February 17, 2021.*

Finally, portions of the Project Site (specifically APNs 4315-018-032, -033, -034, and -048) are located within a TPA identified by the City's ZIMAS.[23,24] The Project Site is also located within an HQTA as designated by SCAG.[25]

(2) Surrounding Uses

The portion of the Project Site located generally north of Bellwood Avenue is bounded by the Century Park hotel to the north, Bellwood Avenue and multi-family residential uses to the east and south, and a small commercial shopping center to the west that includes a dry cleaner/laundry service and a smog check station. The portion of the Project Site located east and south of Bellwood Avenue is generally bounded by a Courtyard by Marriott hotel and Bellwood Avenue to the north, single-family residential uses to the east, and south, and a beauty salon to the west. A grocery store is located across Olympic Boulevard to the north, and a Goodwill Donation Center to the west. The greater Project Site vicinity is developed with a mix of commercial and both single- and multi-family residential uses. The Project Site is located approximately 0.9 mile west of the Fox Studio Lot and approximately 0.5 mile south of the Century City commercial district.

3. Project Impacts

a. Thresholds of Significance

In accordance with the State CEQA Guidelines Appendix G, the Project would have a significant impact related to land use and planning if it would:

Threshold (a): Physically divide an established community; or

Threshold (b): Conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

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[23] *City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Reports for APNs 4315-018-029, -030, -031, -032, -033, -034, and -048, http://zimas.lacity.org/, accessed November 13, 2018.*

[24] *PRC Section 21099 defines a "transit priority area" as an area within 0.5 miles of a major transit stop that is "existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." PRC Section 21064.3 defines "major transit stop" as "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods."*

[25] *SCAG 2016–2040 RTP/SCS, Exhibit 5.1: High Quality Transit Areas In The SCAG Region For 2040 Plan, p. 77.*

As discussed below, the Project's potential impact regarding the physical division of an established community set forth in Threshold (a) was evaluated in the Initial Study included in Appendix A of this Draft EIR and impacts were determined to be less than significant. As such, the analysis herein focuses on Threshold (b), and the following associated factors and considerations identified in the City's 2006 L.A. CEQA Thresholds Guide are used as appropriate.

(1) Land Use Consistency

- Whether the proposal is inconsistent with the adopted land use/density designation in the Community Plan, redevelopment plan or specific plan for the site; and
- Whether the proposal is inconsistent with the General Plan or adopted environmental goals or policies contained in other applicable plans.

b. Methodology

The determination of whether the Project conflicts with any applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect is based upon a review of plans, policies, and regulations that are applicable to the Project Site. State CEQA Guidelines Section 15125(d) requires that an EIR discuss any inconsistencies with applicable plans. A conflict between a project and an applicable plan is not necessarily a significant impact under CEQA unless the inconsistency would result in an adverse physical change to the environment that is a "significant environmental effect" as defined by CEQA Guidelines Section 15382. Specifically, as provided in Continuing Education of the Bar, Practice Under the California Environmental Quality Act, Section 12.34:

> *…if a project affects a river corridor, one standard for determining whether the impact is significant might be whether the project violates plan policies protecting the corridor; the environmental impact, however, is the physical impact on the river corridor.*

Analysis of conflicts and consistency with applicable plans is included in this section of the Draft EIR. Under State Planning and Zoning law (Government Code Section 65000, et seq.) strict conformity with all aspects of a plan is not required. Generally, plans reflect a range of competing interests and agencies are given great deference to determine consistency with their own plans. A proposed project should be considered consistent with a general plan or elements of a general plan if it furthers one or more policies and does not

obstruct other policies.[26] Generally, given that land use plans reflect a range of competing interests, a project should be compatible with a plan's overall goals and objectives but need not be in perfect conformity with every plan policy.

c. Project Design Features

No specific project design features are proposed with regard to land use.

d. Analysis of Project Impacts

Threshold (a): Would the Project physically divide an established community?

As discussed in Section VI, Other CEQA Considerations, of this Draft EIR, and evaluated in the Initial Study for the Project, which is included as Appendix A of this Draft EIR, the Project Site is currently developed with three multi-family residential developments totaling 112 units and includes the portion of Bellwood Avenue that bifurcates the Project Site. Bellwood Avenue is a short, u-shaped street that connects to Olympic Boulevard at each end. The Project would replace the existing multi-family residential uses within the Project Site with a new residential eldercare facility with 192 senior housing residential units comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms. Additionally, as part of the Project, the portion of Bellwood Avenue that bifurcates the Project Site would be vacated and realigned as a private street.[27] However, through public access would be maintained, and access to Olympic Boulevard from adjacent properties along Bellwood Avenue would continue to be available. In addition, the Project does not propose a freeway or other large infrastructure that would divide the existing surrounding community. **Therefore, as determined in the Initial Study, the Project would not physically divide an established community. Thus, impacts with respect to Threshold (a) would be less than significant. No further analysis is required.**

Threshold (b): Would the Project conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

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[26] *Office of Planning and Research (OPR), State of California General Plan Guidelines (2017).*

[27] *The reconfigured Bellwood Avenue is currently proposed to become a private street; however, in the event Bellwood Avenue remains a public street, the Project would still implement the proposed vacation and realignment and through public access would also be maintained.*

(1) Impact Analysis

(a) Consistency with the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

The Project's general consistency with the applicable goals set forth in the 2016–2040 RTP/SCS is analyzed in Table 1 of Appendix E of this Draft EIR. Applicable goals include Goals 2, 4, 5, 6, 7, 8, and 9 related to improving mobility and accessibility, ensuring a sustainable transportation system, maximizing the productivity of the transportation system, protecting the environment and health of residents, encouraging land use that facilitates transit and active transportation, and encouraging energy efficiency. The Project's general consistency with the applicable goals set forth in the 2020–2045 RTP/SCS is also analyzed in Table 1 of Appendix E of this Draft EIR. These include goals 2, 4, 5, 6, 8, and 9 that are similar to the applicable goals in the 2016–2040 RTP/SCS. As detailed therein, the Project would not conflict with these applicable goals set forth in the RTP/SCS adopted for the purpose of avoiding or mitigating an environmental effect. Specifically, the Project would increase density on an already developed urban infill site in a City-designated TPA and SCAG-designated HQTA in close proximity to shopping, services and transit, and served by an established network of roads and freeways. Furthermore, the Project would provide: (1) bicycle parking spaces meeting LAMC requirements that would serve to promote use of bicycles; (2) enhanced sidewalks with new street trees and other improvements along the Project Site's Bellwood Avenue frontage; (3) electric vehicle charging stations; (4) shuttle service for the Project's residents; and (5) a range of senior housing unit types to assist in addressing the demand for senior housing in the City, with a variety of on-site amenities on-site and connectivity to local services.

The Project would also develop a sustainable building which minimizes adverse effects on the environment and minimizes the use of non-renewable resources by complying with Title 24 energy conservation requirements and incorporating the environmentally sustainable building features and construction protocols required by the Los Angeles Green Building Code and CALGreen. Furthermore, the Project would represent smart growth[28] and sustainable development by intensifying density on an urban infill site within a TPA and in proximity to transit, providing shuttle service for the Project's residents, and providing charging stations for electric vehicles. Overall, as evaluated in Section IV.C, Energy, of this Draft EIR, the Project would not result in the wasteful or inefficient use of energy, and impacts would be less than significant.

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[28] *Smart growth is an approach to development that encourages a mix of land uses, diverse housing and transportation options, development within existing neighborhoods, and community engagement. See "Smart Growth Principles" in SCAG's 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy, pp. 174–175.*

In addition, as indicated in Section IV.I, Transportation, of this Draft EIR, the Project would reduce daily vehicle trips when compared with existing conditions and would result in less-than-significant impacts to the transportation system.[29]

Based on the above, the project would not conflict with the applicable RTP/SCS goals related to maximizing mobility and accessibility, ensuring a sustainable transportation system, maximizing the productivity of the transportation system, protecting the environment and health of residents, encouraging land use that facilitates transit and active transportation, and encouraging energy efficiency.

(b) Consistency with Local Plans and Applicable Policies

As discussed above, various local plans and regulatory documents guide development of the Project Site. The following discussion addresses the Project's consistency with applicable goals, policies, and objectives of the General Plan, including the Framework Element, Housing Element, Conservation Element, and Mobility Plan 2035; the Community Plan; LAMC, the WLA TIMP, the Citywide Design Guidelines that were specifically adopted for the purpose of avoiding or mitigating environmental effects.

(i) Los Angeles General Plan

(1) Los Angeles General Plan Framework Element

The Project's general consistency with the applicable goals, objectives, and policies set forth in the Framework Element adopted for the purpose of avoiding or mitigating an environmental effect is discussed in detail in Table 2 of Appendix E of this Draft EIR. Provided below is a general discussion of whether the Project would conflict with any applicable goals, objectives, and policies of the Framework Element. adopted for the purpose of avoiding or mitigating an environmental effect. Also refer to Section IV.A, Aesthetics, for further discussion of the Project's consistency with applicable goals, objectives, and policies set forth in the Framework Element governing scenic quality.

(a) Land Use Chapter

The Project would support the City's applicable objectives and policies of the Framework Element's Land Use Chapter adopted for the purpose of avoiding or mitigating an environmental effect. In particular, the Project would: (1) provide for the spatial distribution of development that promotes an improved quality of life by facilitating a reduction of vehicle trips, vehicle miles traveled (VMT) and air pollution (e.g., Objectives

[29] *Gibson Transportation Consulting, Transportation Assessment for Senior Residential Community at the Bellwood Project, February 2021, revised April 2021. Refer to Appendix H of this Draft EIR.*

3.2 and 3.18) through development of on an urban infill site served by existing infrastructure in a TPA within close proximity to shopping, services and transit, and providing pedestrian improvements such as pedestrian pathways and courtyards throughout the Project Site;[30] (2) provide for the development of streetscape improvements (Policies 3.8.4 and 3.10.4) by providing widened sidewalks, new street trees and other streetscape improvements along portions of Bellwood Avenue, and providing a pedestrian path within the Project Site; and (3) designing multi-family residential development to minimize traffic and noise and that incorporates recreational and open space amenities for Project residents (Policy 3.13.6) by proposing development that would result in less than significant transportation impacts and reduced VMT; locating parking, loading, service, trash, laundry and kitchen facilities within the proposed building to minimize operational noise; and includes 14,630 square feet of open space (e.g., courtyards, outdoor bistros, landscaped terraces, walkways, etc.), which is in excess of the 7,800 square feet of open space required by the LAMC. Therefore, as detailed in Table 2 of Appendix E of this Draft EIR, the Project would not conflict with the applicable objectives and policies that support the goals set forth in the Framework Element's Land Use Chapter.

(b) Housing Chapter

The Project would support the City's objective to plan the capacity for and develop incentives to encourage production of housing units of various types to meet the projected housing needs by income level of the future population (Objective 4.1) by providing a project that would include 192 much needed senior housing residential units, including 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms. This growing need for eldercare facilities in the City is demonstrated by the fact that approximately 10 percent of the City's population is aged 65 years and older,[31] and that this age distribution is expected to almost triple by 2035 in the greater Los Angeles area.[32] In recognition of this need, the LAMC was amended in 2006 by the City Council (Ordinance No. 178,063) to allow eldercare housing within residential and commercial zones, including the R3 and C2 zones (the zoning of the Project Site), subject to the approval of the Zoning Administrator, when the Eldercare Facility does not meet the use, area, or height provisions of the respective zone. The Project would also support the City's objective to encourage the location of new multi-family housing in proximity to transit (Objective 4.2) by developing senior housing and intensifying urban density on an urban infill site within a TPA in close proximity to shopping, services, and transit.

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[30] *Gibson Transportation Consulting, Transportation Assessment for Senior Residential Community at the Bellwood Project, February 2021, revised April 2021. Refer to Appendix H of this Draft EIR.*

[31] *According to United States Census 2010 data presented in Chapter 1. Housing Needs Assessment of the General Plan Housing Element, page 1-5.*

[32] *Chart 1.2 "Change in Age Distribution: Past and Projected, 2000–2010 & 2010–2035" from Housing Element.*

Therefore, as detailed in Table 2 of Appendix E of this Draft EIR, the Project would not conflict with the applicable objectives and policies that support the goals set forth in the Framework Element's Housing Chapter.

(c) Urban Form and Neighborhood Design Chapter

The Project would promote the City's goals, objectives, and policies of the Urban Form and Neighborhood Design Chapter applicable to the Project. Specifically, the Project would encourage proper design and effective use of the built environment to help increase personal safety (Objective 5.9), and utilize development standards to promote development of open space that is as safe as possible (Policy 6.3.3) by incorporating a range of security features including, but not limited to, private on-site security personnel, a closed circuit security camera system, restricted access, security lighting, and maximizing visibility and minimizing areas of concealment. These measures would reduce the demand for police protection services, thereby avoiding the need for new facilities.

Therefore, as detailed in Table 2 of Appendix E of this Draft EIR, the Project would not conflict with the applicable objectives and policies that support the goals set forth in the Framework Element's Urban Form and Neighborhood Design Chapter.

(d) Open Space and Conservation Chapter

The Project would support the goals and policies of the Open Space and Conservation Chapter. Specifically, while the Project would not include open space that could be added to the City's open space inventory such as public plazas, shared school playfields, farmers markets, privately-owned commercial open space accessible to the public, etc. (e.g., Policies 6.4.7 and 6.4.8), it would include open space and recreational facilities for its senior residents, including a ground-level central courtyard, outdoor bistro terrace, multiple landscaped terraces, a walkway around the westerly, southerly and easterly setbacks connecting to the ground-level open space areas, and other landscaped areas which would reduce demand for existing City facilities. In all, the Project would provide 14,630 square feet of open space for Project residents, which would exceed the 7,800 square feet required by the LAMC. The Project would also provide sidewalk and streetscape improvements along its Bellwood Avenue frontage which would promote pedestrian activity and reduce VMT. Therefore, as detailed in Table 2 of Appendix E of this Draft EIR, the Project would not conflict with the applicable objectives and policies that support the goals set forth in the Framework Element's Open Space and Conservation Chapter.

(e) Economic Development Chapter

The Project would support the goals and policies of the Economic Development Chapter. Specifically, the Project would assist in providing a range of housing opportunities

to accommodate future population growth and locate new housing that is accessible to local services and transportation (e.g., Objective 7.9) by: (1) providing a new eldercare facility and increasing residential density on an urban infill site within a TPA in close proximity to shopping, services, and transit; (2) providing job-generating uses within a TPA (as an eldercare facility that would produce jobs related to living assistance); and (3) reducing VMT while at the same time resulting in less-than-significant traffic impacts[33] and less-than-significant air quality impacts.[34] Based on the above, and as detailed in Table 2 of Appendix E of this Draft EIR, the Project would not conflict with the applicable objectives and policies that support the goals set forth in the Framework Element's Economic Development Chapter.

(f) Infrastructure and Public Services Chapter

The Project would support the relevant objectives and policies of the Infrastructure and Public Services Chapter. The Project would reduce the amount of hazardous substances entering the wastewater system (Policy 9.3.1) in that it would implement Best Management Practices (BMPs) and erosion control measures under the required Stormwater Pollution Prevention Plan (SWPPP) to minimize the potential for pollutants and sediment in stormwater runoff from the Project Site during the construction period, and would implement the required Standard Urban Stormwater Mitigation Plan (SUSMP) to do the same during operation. With implementation of the proposed infrastructure upgrades, including the upsizing of the water line along Bellwood Avenue, water supply, storage facilities and delivery systems would be adequate to serve the Project (Goal 9C and Objective 9.10).[35] In addition, the Project would comply with the City's Low Impact Development (LID) requirements and would thus improve water quality and provide adequate drainage throughout the Project Site. Therefore, as detailed in Table 2 of Appendix E of this Draft EIR, the Project would not conflict with the applicable objectives and policies of the Framework Element's Infrastructure and Public Services Chapter.

(2) Mobility Plan 2035

The Project would support the relevant policies of the Mobility Plan 2035. The Project would be designed and operated to prioritize the safety of the most vulnerable roadway users (Policy 1.1) by developing the proposed Bellwood Avenue realignment and sidewalk and streetscape improvements in accordance with City requirements. The Project

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[33] *Gibson Transportation Consulting, Transportation Assessment for Senior Residential Community at the Bellwood Project, February 2021, revised April 2021. Refer to Appendix H of this Draft EIR.*

[34] *See Section IV.B, Air Quality, of this Draft EIR.*

[35] *Fuscoe Engineering, Inc., Water, Sewer and Energy Infrastructure Assessment Report—Senior Residential Community at the Bellwood, February 2020. Included as Appendix J of this Draft EIR.*

would design detour facilities to provide safe passage for all modes of travel during construction (Policy 1.6) by: (1) implementing a Construction Management Plan and work site traffic control plan during construction that includes temporary traffic controls adjacent to public rights-of-way on public roadways to provide for safe passage for all modes of travel and access to all adjacent properties during the construction period; and (2) submitting for LADOT review work site traffic control plan identifying the location of any temporary roadway lane and/or sidewalk closures needed during construction. The Project would recognize walking as a component of every trip and ensure high quality pedestrian access (Policy 2.3) by providing sidewalk and streetscape improvements along the Project's Bellwood Avenue frontage, gating the Project Site for privacy and safety, providing on-site pedestrian facilities, and designing and constructing all Project pedestrian improvements, building entrances and corridors, elevators, and parking areas in accordance with Americans with Disabilities Act (ADA) requirements. The Project would recognize all modes of travel (Policy 3.1), promote land use decisions that result in fewer vehicle trips (Policy 3.3) and reduce VMT (Policy 5.2) by intensifying urban density on an urban infill site in close proximity to shopping, services, and transit; providing on-site pedestrian facilities and sidewalk improvements along its Bellwood Avenue frontage; providing on-site bicycle parking; and providing shuttle service for the Project's senior residents. The Project would encourage adoption of low and zero emission fuel sources (Policy 5.4) by providing charging stations for electric vehicles and constructing the Project in accordance with the environmentally sustainable building features and construction protocols required by the Los Angeles Green Building Code and CALGreen. Therefore, as detailed in Table 3 of Appendix E of this Draft EIR, the Project would not conflict with the applicable objectives and policies of Mobility Plan 2035.

(3) Los Angeles General Plan Housing Element

The Project's consistency with the applicable policies set forth in the Housing Element that were adopted for the purpose of avoiding or mitigating an environmental effect is detailed in Table 4 of Appendix E of this Draft EIR. As discussed therein, the Project would support the objectives to facilitate new construction of a range of different housing types within a TPA that addresses the particular needs of the City's households (Policy 1.1.3) and ensure that housing opportunities are accessible to all residents by providing a range of much needed senior housing types (independent living, assisted living and memory care units) in accordance with State requirements for senior housing.

The Project would support sustainable neighborhoods that have jobs, amenities, services, and transit (Objective 2.2), and that integrates housing with other compatible uses (Policy 2.2.1) by: (1) increasing urban density on an urban infill site within a TPA in proximity to shopping, services, and transit; and (2) including a range of housing types in a mixed-use Neighborhood District, which would reduce VMT; and (3) being compatible with adjacent development (e.g., the Project would include a stepped building design with

landscaped buffers that would provide a buffer between the Project and the residential uses to the south, and the Project would also serve as a transition between the commercial uses to the north and the single-family residential uses to the south). The Project would develop sustainable buildings, and promote reductions in energy consumption, water consumption, and solid waste generation in new development (Objective 2.3 and Policies 2.3.2, 2.3.3, and 2.3.4). Specifically, the Project would achieve this by: (1) complying with Title 24 energy conservation requirements; (2) incorporating sustainable building features and construction protocols required by the Los Angeles Green Building Code and CALGreen; (3) complying with applicable waste reduction and recycling requirements; and (4) increasing urban density on an urban infill site within a TPA in proximity to shopping, services, and transit. Lastly, the Project would promote quality residential development and sustainable open space (Policies 2.4.2 and 2.4.3) by providing open space amenities (central courtyard, landscaped terraces, walkways, landscaping, and perimeter trees) for Project residents, exceeding LAMC open space requirements (providing 14,630 square feet of open space as compared to the 7,800 square feet required), and quality urban design and contemporary architecture (e.g., step-backs, landscaped terraces, building articulation and fenestration, a variety of surface materials, etc.) that provides visual interest and both complements and is compatible with the existing surrounding uses. .Therefore, the Project would not conflict with the applicable objectives and policies of the Housing Element.

(4) Los Angeles General Plan Conservation Element

As outlined above, the Conservation Element establishes an objective to protect important cultural and historical sites and resources for historical, cultural, research, and community educational purposes and a corresponding policy to continue to protect historic and cultural sites and/or resources potentially affected by proposed land development, demolition, or property modification activities.

As discussed in the Initial Study, included as Appendix A of this Draft EIR, based on a review of the SurveyLA Historic Resources Survey Report—West Los Angeles Community Plan Area,[36] the HistoricPlacesLA database,[37] and the Los Angeles ZIMAS database, the existing structures within the Project Site have not been individually listed in or formally determined to be eligible for listing in the National Register or the California Register. In addition, the Project Site has not been designated as a Historic-Cultural Monument and is not located within an existing Historic Preservation Overlay Zone. Furthermore, as analyzed in the Historical Resource Assessment Report, prepared by

[36] *City of Los Angeles, SurveyLA, Historic Resources Survey Report—West Los Angeles Community Plan Area, August 2012.*

[37] *City of Los Angeles, HistoricPlacesLA, www.historicplacesla.org/map, accessed February 17, 2021.*

Historic Resources Group and provided in Appendix IS-2, of the Initial Study, the existing buildings on the Project Site are not eligible for historic designation in the National Register, the California Register, or as City of Los Angeles Historic-Cultural Monuments. Therefore, as no historic resources are located within the Project Site, removal of the existing buildings within the Project Site and development of the Project would not create a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5. Therefore, the Project would not conflict with the cultural resources policies of the Conservation Element related to historic resources.

With regard to archaeological resources, as discussed in the Initial Study, the results of the archaeological records search conducted for the Project Site and included in Appendix IS-3 of the Initial Study indicate that there are no identified archaeological sites within the Project Site. There is one archaeological site located within a 0.5-mile radius of the Project Site. While the Project would require grading of the Project Site and excavations approximately 30 feet below grade, and previously unknown archaeological resources could be encountered. Given that there are no identified archaeological sites within the Project Site and immediate vicinity, the Project is not anticipated to cause a substantial adverse change in the significance of an archaeological resource. Hence, the Project would not conflict with the cultural resources policies of the Conservation Element related to archaeological resources. Nonetheless, the City generally imposes a condition of approval to address any unanticipated archaeological resources discovered during construction.

With regard to human remains, as discussed in the Initial Study, no known traditional burial sites have been identified on the Project Site. In addition, if human remains were discovered during construction of the Project, work in the immediate vicinity would be halted, the County Coroner, construction manager, and other entities would be notified per California Health and Safety Code Section 7050.5, and disposition of the human remains and any associated grave goods would occur in accordance with PRC Sections 5097.91 and 5097.98. With the implementation of regulatory requirements, the Project would not disturb any human remains. Hence, the Project would not conflict with cultural resources policies of the Conservation Element related to human remains.

With regard to paleontological resources, as discussed in the Initial Study, a records search conducted for the Project Site included in Appendix IS-4 of the Initial Study indicates there are no previously encountered fossil vertebrate localities located within the Project Site. However, the possibility exists that paleontological artifacts that were not recovered during prior construction or other human activity may be present. As set forth in Mitigation Measure CUL-MM-1 included in the Initial Study, a qualified paleontologist would be retained in the event paleontological materials are encountered, and grading and excavation activities in the area of the exposed material would be temporarily diverted or redirected to facilitate evaluation and, if necessary, salvage. Hence, the Project would not

conflict with the cultural resources policies of the Conservation Element related to paleontological resources.

(5) West Los Angeles Community Plan

The Project's consistency with the applicable goals, objectives, and policies set forth in the Community Plan is discussed in detail in Table 5 of Appendix E of this Draft EIR. As discussed therein, the Project would be generally consistent with the objectives and policies that support the goals of the Community Plan. Specifically, by providing 192 senior housing residential units, the Project would provide for the development of new housing (Objective 1-1), promote housing accessible to more segments of the population including seniors (Objective 1-4), provide for adequate multi-family housing (Policy 1-1.3), promote greater individual choice in housing (Policy 1-4.1), and promote neighborhood preservation and preserve and enhance residential character (Policy 1-1.2 and Objective 1-3). There is a growing need for eldercare facilities in Los Angeles because approximately 10 percent of the City's population is aged 65 years and older,[38] and the age distribution is expected to shift, and almost triple by 2035 in the greater Los Angeles area.[39] The Project would help meet this need and would result in a net increase in residential units on the Project Site. Furthermore, the Project would: provide a range of eldercare housing types, including independent living, assisted living, and memory care residential units; serve as a transitional use between the existing commercial uses to the north and the existing single-family residential uses to the south; ensure compatibility with the adjacent single-family residential uses by implementing a stepped building design, by integrating parking, recycling areas, trash areas, etc., within the proposed building, and by providing a landscaped open space buffer.

The Project would also reduce vehicle trips and congestion by developing new housing in proximity to adequate services and facilities (Objective 1-2) and locating higher residential densities near commercial centers and major bus routes (Policy 1-2.1) by increasing urban density on an urban infill site in a TPA within proximity to major commercial corridors, services and transit, reducing VMT.[40]

Policy 1.4-2 calls for ensuring that new housing opportunities minimize displacement of residents. The Project would displace the existing 112 units of multi-family housing on

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[38] *According to United States Census 2010 data presented in Chapter 1. Housing Needs Assessment of the General Plan Housing Element, page 1-5.*

[39] *Chart 1.2 "Change in Age Distribution: Past and Projected, 2000–2010 & 2010–2035" from Housing Element, page 1-5.*

[40] *Gibson Transportation Consulting, Transportation Assessment for Senior Residential Community at the Bellwood Project, February 2021, revised April 2021. Refer to Appendix H of this Draft EIR.*

the Project Site and the associated residents of those units. However, the Project would replace this housing with 192 eldercare housing units and would result in a net increase of 80 residential units (192 proposed units—112 existing units to be removed). In addition, the Applicant would comply with applicable requirements of the RSO and Ellis Act related to relocation. Furthermore, as previously noted, there is increasing need in the City for senior housing. Specifically, approximately 10 percent of the City's population is aged 65 years and older,[41] and this age distribution is expected to almost triple by 2035 in the greater Los Angeles area.[42] In recognition of this need, the LAMC was amended by the City Council (Ordinance No. 178,063) to allow eldercare housing within residential and commercial zones, including the R3 and C2 zones (the zoning of the Project Site), subject to the approval of the Zoning Administrator, when the Eldercare Facility does not meet the use, area, or height provisions of the respective zone. Additionally, as discussed in Section IV.G, Population and Housing, of this Draft EIR, it is anticipated that senior residents will vacate their current residential housing to move to the Project Site upon completion of the Project, thereby providing for the availability of other housing elsewhere.

Furthermore, the Project would encourage pedestrian-oriented design in designated areas and in new development (Policy 2.2-1) by: locating parking, trash, recycling, and loading areas within the proposed building rather than next to the public right-of-way, thus minimizing the interface with pedestrians; and by providing on-site pedestrian facilities as well as widened sidewalks and streetscape improvements along the Project's Bellwood Avenue frontage.

Therefore, based on the above, the Project would generally not conflict with the applicable goals, objectives and policies of the Community Plan.

(ii) West Los Angeles Transportation Improvement and Mitigation Specific Plan

As previously stated, the Project is located within the boundaries of the West Los Angeles Transportation Improvement and Mitigation Specific Plan (WLA TIMP). However, the Project would not be subject to WLA TIMP requirements, including payment of TIA fees or implementation of a TDM program, because the Project is exempt as an eldercare facility project.

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[41] *According to United States Census 2010 data presented in Chapter 1. Housing Needs Assessment of the General Plan Housing Element, page 1-5.*

[42] *Chart 1.2 "Change in Age Distribution: Past and Projected, 2000–2010 & 2010–2035" from Housing Element.*

(iii) Los Angeles Municipal Code

As indicated previously, seven of the nine Project Site lots south of Bellwood Avenue are zoned by the LAMC as R3-1-O (Multiple Residential, Height District 1, Oil Drilling),[43] while two of the Project Site lots south of Bellwood Avenue and four of the Project Site lots north of Bellwood Avenue are zoned C2-1VL-O (Commercial, Height 1VL, Oil Drilling).[44] The R3 zone permits a wide variety of residential uses, including group dwellings, multiple dwellings, apartment houses, boarding houses, rooming houses, accessory uses and home occupations, senior independent housing, and assisted living care housing. The C2 zone permits a wide variety of uses, including, but not limited to, eldercare facilities, multiple dwellings, various retail and restaurant spaces, auditoriums, automotive fueling and service stations, churches, drive-in businesses, hospitals, sanitariums, clinics, and schools. Height District 1 within the R3 Zone limits building heights to 45 feet and the floor-area ratio (FAR) to 3:1. Height District 1VL within the C2 Zone limits building heights to 45 feet and three stories (except that there is no restriction on the number of stories for buildings used entirely for residential purposes) and the FAR to 1.5:1. The "O" designation indicates the Project Site is located within an Oil Drilling District where the drilling of oil wells or the production from the wells of oil, gases, or other hydrocarbon substances is permitted.

(1) Density

The Project Site currently contains 57,343 square feet of lot area zoned R3 and 36,079 square feet of lot area zoned C2. Following the proposed merger and subdivision, including the vacated and realigned portion of Bellwood Avenue and excluding an anticipated five-foot right-of-way dedication on a portion of Bellwood Avenue, the Project Site would contain a total lot area of 93,422 square feet.[45] Pursuant to LAMC Section 12.10.C.4, the allowable density for the R3 zoned portion of the Project Site is one dwelling unit per 800 square feet of lot area and/or one guest room per 500 square feet of lot area. As a result, the R3 portion of the Project Site has an allowable density of 71 dwelling units and/or 114 guest rooms. Pursuant to LAMC Section 12.14.C.3, the allowable density for the C2 zoned portion of the Project Site is one dwelling unit per 400 square feet of lot area and/or one guest room per 200 square feet of lot area. As a result, the C2 portion of the Project Site has an allowable density of 90 dwelling units or 180 guest rooms. In total, the Project Site has an allowable density of 161 dwelling units or 294 guest rooms. The Project would provide 71 dwelling units and 121 guest rooms, to be averaged over the

[43] *The R3 zoning applies to Lots 29-35 of Block 13 of Tract 7260.*

[44] *The C2 zoning applies to Lots 36-37 of Block 13 of Tract 7260 and Lots 10-13 of Block 14 of Tract 7260.*

[45] *The total lot area may vary depending on the ultimate configuration and designation of the realigned portion of Bellwood Avenue.*

Project Site as proposed under the Eldercare Facility Unified Permit pursuant to LAMC Section 14.3.1, which is below the maximum density permitted as outlined above. Therefore, the Project would not provide for residential densities that are greater than that permitted by the existing zoning of the Project Site.

(2) Land Uses, FAR, and Building Heights

Eldercare housing, including independent living, assisted living, and memory care units, is a permitted use in the C2 zone according to the LAMC. Furthermore, while the R3 zone allows for senior independent living and allows for assisted living care housing, it does not permit Alzheimer's/dementia care housing (e.g., memory care housing) or eldercare facilities by right. The Project is proposing building heights up to 70 feet, which would exceed the 45 feet permitted within the R3-1-O and C2-1VL-O zones. In addition, the Project would result in an FAR of up to approximately 2.7:1 to 3.2:1 averaged across the Project Site,[46] which would exceed the 1.5:1 FAR permitted on the C2 zoned portion of the Project Site and may exceed the 3:1 FAR permitted on the R3 zoned portion of the Project Site. The Project is requesting an Eldercare Facility Unified Permit pursuant to LAMC Section 14.3.1 which would permit the Project, despite the above-specified zoning restrictions, and would also permit access from a less restrictive zone (C2) to more restrictive zone (R3) for accessory uses such as parking. As specified in LAMC Section 14.3.1.A., the purpose of the Eldercare Facility Unified Permit Process is "…to provide development standards…, create a single process for approvals, and facilitate the processing of applications of Eldercare Facilities…(as) these facilities provide much needed services and housing for the growing senior population of the City of Los Angeles." To this end, LAMC Section 14.3.1.B. specifically grants the Zoning Administrator authority to permit an eldercare facility on a lot (or lots) within the R3 and C2 Zones when such a facility "does not meet the use, area, or height provisions of the respective zone contained in [Chapter 1 of the LAMC], or the requirements of any specific plan, supplemental use district, "T" classification, "Q" condition, "D" limitation, or Citywide regulation adopted or imposed by City action."

With approval of the requested Eldercare Facility Unified Permit, the Project would be consistent with the LAMC land use, FAR, and building height restrictions applicable at the Project Site.

[46] *FAR is a calculation of the ratio of building square footage to buildable lot area. As the final buildable lot area may vary based on the ultimate configuration and designation of the realigned portion of Bellwood Avenue, the FAR may range from approximately 2.7:1 to 3.2:1; however, the square footage of the building would not change.*

The Project would include the sale and service of a full line of alcoholic beverages for on-site consumption by Project residents and their visitors/guests. Pursuant to LAMC Section 12.24.W.1, the Applicant is requesting a Conditional Use Permit to permit the sale and service of alcoholic beverages to Project residents and their visitors/guests, as an incidental use in and accessory to the operation of the eldercare facility. The Applicant is also requesting a Zone Variance pursuant to LAMC Section 12.27.B for the sale and service of alcoholic beverages to Project residents and their visitors/guests for the portion located in the R3 Zone. With approval of these requests, the Project would not conflict with the LAMC.

(3) Setbacks

The Project requires and would provide the following minimum setbacks: 0-foot front yard (in the C2 Zone along the north property lines), 9-foot side yards (along the east and west property lines) and a 15-foot rear yard (along the south/southernmost property line).[47] The Project would generally provide greater setbacks than these minimum requirements required by the LAMC.

(4) Parking

Per the automobile parking requirements in LAMC Sections 12.21.A4(d)(5) and 12.21.A4(u) and the bicycle parking requirements in LAMC Section 12.21.A16(a)(1)(i)(b) for eldercare facilities, the Project would be required to provide 81 automobile parking spaces and 72 bicycle parking spaces (24 short-term spaces and 48 long-term spaces). The Project would provide up to 140 automobile parking spaces, which would exceed that required by the LAMC, and 72 bicycle parking spaces, which would meet LAMC requirements.

(5) Open Space

As shown in Figure II-12 in Section II, Project Description, of this Draft EIR, the various components and levels of the proposed building would be integrated by a series of

[47] *The division of land includes the request to designate yards so that generally the northerly property line is designated as the front yard and the southerly most property line is designated as the rear yard. All other property lines are to be designated as side yards. If the realigned portion of Bellwood Avenue through the Project Site is designated a private street, the front setback of the proposed Project would be within the portion of the Project Site located north of Bellwood Avenue and zoned C2, which does not require a front yard setback. If the realigned portion of Bellwood Avenue through the Project Site is designated a public street, the majority of the building's frontage would be in the C2 zone and a limited portion of the building's frontage would be in the R3 zone. If all of the building frontage along Bellwood Avenue is considered front yard, a modification would be requested as part of the eldercare permit for the Project for a zero-foot setback in the limited portion of the building frontage that would be in the R3 zone consistent with the rest of the building's frontage in the C2 zone.*

landscaped courtyards and terraces provided at every floor of the building. Overall, the Project would provide 14,630 square feet of open space, which would exceed the open space required for the Project by the LAMC of 7,800 square feet.

(6) Conclusion

Based on the above and with approval of the requested discretionary actions outlined in Section II, Project Description, of this Draft EIR (including, but not limited to, the requested Eldercare Facility Unified Permit, Site Plan Review and Vesting Tentative Tract Map), the Project would be generally consistent with the applicable zoning provisions of the LAMC.

(iv) Citywide Design Guidelines

The Citywide Design Guidelines are intended as performance goals and not strict regulations or development standards. Although each of the Citywide Design Guidelines should be considered in a project, not all are appropriate in every case. As evaluated in Section IV.A, Aesthetics, of this Draft EIR, the Project would not conflict with the Citywide Design Guidelines adopted for the purpose of avoiding or mitigating an environmental effect. Refer to Section IV.A, Aesthetics, of this Draft EIR, for an analysis of the Project's consistency with the Citywide Design Guidelines.

(c) Conclusion Regarding Impacts Relative to Land Use Consistency

Based on the analysis provided above, the Project would not conflict with goals, policies, or objectives in local and regional plans that were adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the Project would not conflict with or impede the General Plan, Community Plan, or the whole of the relevant environmental policies in other applicable plans adopted for the purpose of avoiding or mitigating an environmental effect. As such, impacts related to conflicts with applicable plans, policies, and regulations would be less than significant.

(2) Mitigation Measures

Project-level impacts related to conflicts with applicable land use plans would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to conflicts with land use plans were determined to be less than significant without mitigation. Therefore, no mitigation measures are required, and the impact level remains less than significant.

e. Cumulative Impacts

(1) Impact Analysis

The six related projects include the Westfield Century City New Century City Plan Project (residential and commercial), Century City Center (office), Century Plaza (condominiums, office, retail, and other), Fox Studio Master Plan (studio uses), and two apartment projects. As with the Project, the related projects would be required to comply with relevant land use policies and regulations through review by City regulatory agencies and would be subject to CEQA review. Therefore, the Project and the related projects would not result in significant cumulative land use impacts. In addition, as the Project would be consistent with applicable land use plans and zoning standards, the Project would not incrementally contribute to cumulative inconsistencies with respect to land use plans and zoning standards. **Therefore, cumulative impacts with regard to conflicts with land use plans would be less than significant.**

(2) Mitigation Measures

Cumulative impacts related to land use and planning would be less than significant. Thus, no mitigation measures would be necessary.

(3) Level of Significance After Mitigation

Cumulative impacts related to land use and planning were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact levels remains less than significant.

IV. Environmental Impact Analysis

F. Noise

1. Introduction

This section of the Draft EIR analyzes the potential noise and vibration impacts that may result from the Project. Specifically, the analysis describes the existing noise environment in the vicinity of the Project Site, estimates future noise and vibration levels at surrounding sensitive land uses resulting from construction and operation of the Project, identifies the potential for significant impacts, and provides mitigation measures to address significant impacts. In addition, this section of the Draft EIR evaluates the potential cumulative noise and vibration impacts resulting from the Project together with related projects and other future growth. Noise calculation worksheets are included in Appendix F to this Draft EIR.

2. Environmental Setting

a. Noise and Vibration Fundamentals

(1) Noise

(a) Fundamentals of Sound and Environmental Noise

Noise is commonly defined as sound that is undesirable because it interferes with speech communication and hearing, causes sleep disturbance, or is otherwise annoying (unwanted sound). The decibel (dB) is a conventional unit for measuring the amplitude of sound as it accounts for the large variations in sound pressure amplitude and reflects the way people perceive changes in sound amplitude.[1] Human hearing is not equally sensitive to sound at all frequencies. Therefore, to approximate this human frequency-dependent response, the A-weighted filtering system is used to adjust measured sound levels (dBA). The term "A-weighted" refers to filtering the noise signal in a manner that corresponds to

[1] *All sound levels measured in decibel (dB), as identified in the noise calculation worksheets included in Appendix F to this Draft EIR and in this section of the Draft EIR, are relative to $2x10^{-5}$ N/m^2 (the reference unit for sound pressure measured in terms of newton per square meter, a common method for measuring sound pressure).*

the way the human ear perceives sound. Examples of various sound levels in different environments are shown in Table IV.F-1 on page IV.F-3.

People commonly judge the relative magnitude of sound sensation using subjective terms, such as "loudness" or "noisiness." A change in sound level of 3 dB is considered "just perceptible," a change in sound level of 5 dB is considered "clearly noticeable," and a change (increase) of 10 dB is typically recognized as "twice as loud."[2]

(b) Outdoor Sound Propagation

In an outdoor environment, sound energy attenuates through the air as a function of distance. Such attenuation is called "distance loss" or "geometric spreading" and is based on the type of source configuration (i.e., a point source or a line source). The rate of sound attenuation for a point source, such as a piece of mechanical or electrical equipment (e.g., air conditioner or bulldozer), is 6 dBA per doubling of distance from the noise source to the receptor over acoustically "hard" sites (e.g., asphalt and concrete surfaces) and 7.5 dBA per doubling of distance from the noise source to the receptor over acoustically "soft" sites (e.g., soft dirt, grass or scattered bushes and trees).[3] For example, an outdoor condenser fan that generates a sound level of 60 dBA at a distance of 50 feet from a point source at an acoustically hard site would attenuate to 54 dBA at a distance of 100 feet from the point source and attenuate to 48 dBA at 200 feet from the point source. The rate of sound attenuation for a line source, such as a constant flow of traffic on a roadway, is 3 dBA and 4.5 dBA per doubling of distance from the point source to the receptor for hard and soft sites, respectively.[4]

In addition, structures (e.g., buildings and solid walls) and natural topography (e.g., hills and berms) that obstruct the line-of-sight between a noise source and a receptor further reduce the noise level if the receptor is located within the "shadow" of the obstruction, such as behind a sound wall. This type of sound attenuation is known as "barrier insertion loss." If a receptor is located behind the wall but still has a view of the source (i.e., the line-of-sight is not fully blocked), some barrier insertion loss would still occur but to a lesser extent. Additionally, a receptor located on the same side of the wall as a noise source may actually experience an increase in the perceived noise level as the wall reflects noise back to the receptor, thereby compounding the noise. Noise barriers can provide noise level reductions ranging from approximately 5 dBA (where the barrier just breaks the line-of-sight between the source and receiver) to an upper range of 20 dBA

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[2] *Bies & Hansen, Engineering Noise Control, 1988, Table 2.1.*

[3] *Caltrans, Technical Noise Supplement (TeNS), 2009, Chapter 2.1.4.2.*

[4] *Caltrans, Technical Noise Supplement (TeNS), 2009, Chapter 2.1.4.2.*

Table IV.F-1
Typical Noise Levels

Common Outdoor Activities	Noise Levels (dBA)	Common Indoor Activities
	110	Rock Band
Jet Fly-Over at 1000 feet		
	100	
Gas Lawn Mower at 3 feet		
	90	
Diesel Truck at 50 feet at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
Gas Lawn Mower at 100 feet	**70**	Vacuum Cleaner at 10 feet
Commercial Area		Normal Speech at 3 feet
Heavy Traffic at 300 feet	**60**	
		Large Business Office
Quiet Urban Daytime	**50**	Dishwasher Next Room
Quiet Urban Nighttime	**40**	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
	0	

Source: Caltrans, Technical Noise Supplement (TeNS), Table 2-5, 2009.

with a more substantial barrier.[5] Additionally, structures with closed windows can further attenuate exterior noise by a minimum of 20 dBA to 30 dBA.[6]

(c) Environmental Noise Descriptors

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise is dependent upon the total acoustical energy content, as well as the time and duration of occurrence. The most frequently used noise descriptors, including those used by the City of Los Angeles (City), are summarized below.

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[5] *Caltrans, Technical Noise Supplement (TeNS), 2009, Chapter 2.1.4.2.*

[6] *FHWA, Highway Traffic Noise Analysis and Abatement Policy and Guidance, 1995.*

- *Equivalent Sound Level (L_{eq}).* L_{eq} is a measurement of the acoustic energy content of noise averaged over a specified time period. Thus, the L_{eq} of a time-varying sound and that of a steady sound are the same if they deliver the same amount of energy to the receptor's ear during exposure. L_{eq} for 1-hour periods, during the daytime or nighttime hours, and 24-hour periods are commonly used in environmental assessments. For evaluating community impacts, this rating scale does not vary regardless of whether the noise occurs during day or night.

- *Maximum Sound Level (L_{max}).* L_{max} represents the maximum sound level measured during a measurement period.

- *Community Noise Equivalent Level (CNEL)*. CNEL is the time average of all A-weighted sound levels for a 24-hour period with a 10-dBA adjustment (upward) added to the sound levels that occur between the hours of 10:00 P.M. and 7:00 A.M. (nighttime), and a 5-dBA adjustment (upward) added to the sound levels that occur between the hours of 7:00 P.M. and 10:00 P.M. (evening). These penalties attempt to account for increased human sensitivity to noise during the nighttime and evening periods, particularly where sleep is the most probable activity. CNEL has been adopted by the State of California to define the community noise environment for development of the community noise element of a general plan and is also used by the City for land use planning and to describe noise impacts in the *L.A. CEQA Thresholds Guide*.[7]

- *Day/Night Average Sound Level (L_{dn})*. L_{dn} is the time average of all A-weighted sound levels for a 24-hour period, similar to the CNEL. L_{dn} includes a 10 dBA adjustment (upward) added to the sound levels that occur between the hours of 10:00 P.M. and 7:00 A.M. (nighttime). Unlike CNEL, L_{dn} does not include the 5 dBA adjustment (upward) to the sound levels which occur between the hours of 7:00 P.M. and 10:00 P.M. (evening). L_{dn} is typically within one dBA of CNEL and the two measurements are often used interchangeably for the purposes of defining the community noise environment and measuring A-weighted sound levels for a 24-hour period.

(2) Ground-Borne Vibration

Vibration is commonly defined as an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The peak particle velocity (PPV) or the root-mean square (RMS) velocity is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak of the vibration signal and is typically used for evaluating potential

[7] *State of California, General Plan Guidelines, 2017.*

building damage.[8] The RMS velocity is defined as the square-root of the average of the squared amplitude of the vibration signal and is typically more suitable for evaluating human response to ground-borne vibration.[9] The RMS vibration velocity level can be presented in inch per second or in VdB (a decibel unit referenced to one micro-inch per second).[10] Ground-borne vibration generated by man-made activities (e.g., road traffic, construction operations) typically weakens with greater horizontal distance away from the source of the vibration.

b. Regulatory Framework

Various government agencies have established noise regulations and policies to protect citizens from adverse effects associated with noise and ground-borne vibration. The City has adopted a number of regulations and policies, which are based in part on federal and state regulations and are intended to control, minimize, or mitigate environmental noise effects. There are no City-adopted regulations or policies that relate to ground-borne vibration; therefore, the ground-borne vibration standards and guidelines from the Federal Transit Administration (FTA) are used for this analysis. The regulations and policies that are relevant to Project construction and operation noise are discussed below.

(1) Federal

Under the authority of the Noise Control Act of 1972, the United States Environmental Protection Agency (USEPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, the USEPA issued guidance levels for the protection of public health and welfare in residential land use areas[11] of an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA. These guidance levels are not considered as standards or regulations and were developed without consideration of

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[8] *Vibration levels are described in the noise calculation worksheets included in Appendix F to this Draft EIR and in this section of the Draft EIR in terms of peak particle velocity level in the unit of inches per second.*

[9] *Federal Transit Administration (FTA), "Transit Noise and Vibration Impact Assessment," Section 5.1, September 2018.*

[10] *VdB (velocity level in decibel) = 20 x Log (V / V_{ref}), where V is the RMS velocity amplitude in micro-inch per second and V_{ref} is the reference velocity amplitude of $1x10^{-6}$ inch per second (1 micro-inch per second). All vibration levels described in decibel (VdB) in the noise calculation worksheets included in Appendix F to this Draft EIR and in this section of the Draft EIR are RMS and referenced to 1 micro-inch per second.*

[11] *United States Environmental Protection Agency, EPA Identifies Noise Levels Affecting Health and Welfare, April 1974.*

technical or economic feasibility. There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the Project.

(2) State

The State of California Governor's Office of Planning and Research (OPR) has established general plan guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The types of land uses addressed by the State and the acceptable noise categories for each land use are included in the *State of California General Plan Guidelines,* which is published and updated by the OPR. The level of acceptability of the noise environment is dependent upon the activity associated with the particular land use. For example, according to the State, an exterior noise environment up to 65 dBA CNEL is "normally acceptable" for single- and multi-family residential uses, without special noise insulation requirements. In addition, noise levels up to 75 dBA CNEL are "conditionally acceptable" with special noise insulation requirements, while noise levels at 75 dBA CNEL and above are "clearly unacceptable" for residential and hotel uses.[12] In addition, the 2019 California Building Standards Code requires that where the ambient noise environment exceeds 65 dBA CNEL, measures should be implemented to achieve an interior noise environment of a residential use (habitable room) not to exceed 45 dBA CNEL. The 2019 California Green Building Standards Code also requires that where the ambient noise environment exceeds 65 dBA CNEL or 65 dBA L_{eq}, measures should be implemented to achieve an interior noise environment of a non-residential use that would not exceed 50 dBA $L_{eq\ (1\text{-}hour)}$.

(3) City of Los Angeles Regulations and Policies

The Noise Element of the City of Los Angeles General Plan (General Plan) establishes CNEL guidelines for land use compatibility (refer to Table IV.F-2 on page IV.F-7) and includes a number of goals, objectives, and policies for land use planning purposes. The City also has regulations to control unnecessary, excessive, and annoying noise, as set forth in the Los Angeles Municipal Code (LAMC) Chapter XI, Noise Regulation. In addition, the *L.A. CEQA Thresholds Guide* provides thresholds for determining noise impacts of a project. These regulations and policies are described further below.

(a) Noise Element

The overall purpose of the Noise Element of the General Plan (Noise Element) is to guide policymakers in making land use determinations and in preparing noise ordinances

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[12] *State of California, Governor's Office of Planning and Research, General Plan Guidelines, July 2017, p. 374.*

Table IV.F-2
City of Los Angeles Guidelines for Noise Compatible Land Use

Land Use	Community Noise Exposure: Day-Night Average Exterior Sound Level (CNEL dB)						
	50	55	60	65	70	75	80
Residential Single-Family, Duplex, Mobile Home	A	C	C	C	N	U	U
Residential Multi-Family	A	A	C	C	N	U	U
Transient Lodging, Motel, Hotel	A	A	C	C	N	U	U
School, Library, Church, Hospital, Nursing Home	A	A	C	C	N	N	U
Auditoriums, Concert Hall, Amphitheater	C	C	C	C/N	U	U	U
Sports Arena, Outdoor Spectator Sports	C	C	C	C	C/U	U	U
Playgrounds, Neighborhood Park	A	A	A	A/N	N	N/U	U
Golf Course, Riding Stable, Water Recreation, Cemetery	A	A	A	A	N	A/N	U
Office Buildings, Business, Commercial, Professional	A	A	A	A/C	C	C/N	N
Agriculture, Industrial, Manufacturing, Utilities	A	A	A	A	A/C	C/N	N

A = Normally Acceptable: Specified land use is satisfactory, based upon assumption buildings involved are conventional construction, without any special noise insulation.

C = Conditionally Acceptable: New construction or development only after a detailed analysis of the noise mitigation is made and needed noise insulation features included in project design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

N = Normally Unacceptable: New construction or development generally should be discouraged. A detailed analysis of the noise reduction requirements must be made and noise insulation features included in the design of a project.

U = Clearly Unacceptable: New construction or development generally should not be undertaken.

Source: California Department of Health Services (DHS).

that would limit exposure of citizens to excessive noise levels. The following policies and objectives from the Noise Element are applicable to the Project:[13]

- Objective 2 (Non-airport): Reduce or eliminate non-airport related intrusive noise, especially relative to noise-sensitive uses.
- Policy 2.1: Enforce and/or implement applicable City, State, and federal regulations intended to mitigate proposed noise producing activities, reduce intrusive noise and alleviate noise that is deemed a public nuisance.

[13] *Noise Element of the Los Angeles City General Plan, adopted February 3, 1999.*

- Objective 3 (Land Use Development): Reduce or eliminate noise impacts associated with proposed development of land and changes in land use.

- Policy 3.1: Develop land use policies and programs that will reduce or eliminate potential and existing noise impacts.

The City's noise compatibility guidelines are provided in Table IV.F-2 on page IV.F-7.

(b) City of Los Angeles Noise Regulations (Chapter XI of the LAMC)

Chapter XI, Noise Regulation, of the LAMC (referred to herein as the Noise Regulations) establishes acceptable ambient sound levels to regulate intrusive noises (e.g., stationary mechanical equipment and vehicles other than those traveling on public streets) within specific land use zones and provides procedures and criteria for the measurement of the sound level of noise sources. These procedures recognize and account for differences in the perceived level of different types of noise and/or noise sources. In accordance with the Noise Regulations, a noise level increase from certain regulated noise sources of 5 dBA over the existing or presumed ambient noise level at an adjacent property line is considered a violation of the Noise Regulations. The 5-dBA increase above ambient is applicable to City-regulated noise sources (e.g., mechanical equipment), and is applicable any time of the day.[14]

The Noise Regulations state that the baseline ambient noise shall be the actual measured ambient noise level or the City's presumed ambient noise level, whichever is greater. The actual ambient noise level is the measured noise level averaged over a period of at least 15 minutes, $L_{eq(15\text{-minute})}$. The Noise Regulations indicate that in cases where the actual measured ambient conditions are not known, the City's presumed daytime (7:00 A.M. to 10:00 P.M.) and nighttime (10:00 P.M. to 7:00 A.M.) ambient noise levels defined in LAMC Section 111.03 should be used. The City's presumed ambient noise levels for specific land use zones, as set forth in LAMC Section 111.03, are provided in Table IV.F-3 on page IV.F-9.

To account for people's increased tolerance for short-duration noise events, the Noise Regulations provide a 5-dBA allowance for noise sources occurring more than five minutes but less than 15 minutes in any 1-hour period (for a total of 10 dBA above the ambient), and an additional 5-dBA allowance (total of 15 dBA above the ambient) for noise sources occurring 5 minutes or less in any 1-hour period. These additional allowances for short-duration noise sources are applicable to noise sources occurring between the hours of 7:00 A.M. and 10:00 P.M. (daytime hours). Furthermore, the Noise Regulations provide

[14] *Los Angeles Municipal Code, Chapter XI, Section 112.02.*

Table IV.F-3
City of Los Angeles Presumed Ambient Noise Levels

Zone	Daytime (7:00 A.M. to 10:00 P.M.) dBA (L_{eq})	Nighttime (10:00 P.M. to 7:00 A.M.) dBA (L_{eq})
Residential, School, Hospitals, Hotels	50	40
Commercial	60	55
Manufacturing (M1, MR1, and MR2)	60	55
Heavy Manufacturing (M2 and M3)	65	65

Source: LAMC Section 111.03.

that 5 dBA shall be added to the sound level measurement for steady high-pitched noise or repeated impulsive noises.[15,16]

The LAMC also provides noise regulations with respect to vehicle-related noise, including Section 114.02, which prohibits the operation of any motor driven vehicles upon any property within the City in a manner that would cause the noise level on the premises of any occupied residential property to exceed the ambient noise level by more than 5 dBA; Section 114.03, which prohibits loading and unloading operations between the hours of 10:00 P.M. and 7:00 A.M. that cause any impulsive sound, raucous or unnecessary noise within 200 feet of any residential building; and Section 114.06, which requires vehicle theft alarm systems to be silenced within five minutes.

LAMC Section 112.01 prohibits the use or operation of a machine or device for the producing, reproducing or amplification of the human voice, music, or any other sound that causes the ambient noise level on the premises of any occupied property to be exceeded by more than 5 dBA.

In addition, the Noise Regulations (LAMC Section 112.05) set a maximum noise level from construction equipment (powered equipment or powered hand tools) operating between the hours of 7:00 A.M. and 10:00 P.M., in any residential zone of the City or within 500 feet thereof, of 75 dBA, measured at a distance of 50 feet from the source, unless

[15] *LAMC, Chapter XI, Article I, Section 111.02 (b).*

[16] *Impulsive sound as defined in the LAMC Section 111.01(e) is sound of short duration, usually less than one second, with an abrupt onset and rapid decay. Examples of impulsive sound shall include, but are not limited to, explosion, musical bass drumbeats, or the discharge of firearms.*

compliance with this limitation is technically infeasible.[17] LAMC Section 41.40 prohibits construction noise that disturbs persons occupying sleeping quarters in any dwelling, hotel, or apartment or other place of residence between the hours of 9:00 P.M. and 7:00 A.M. Monday through Friday, before 8:00 A.M. and after 6:00 P.M. on Saturday or national holiday, and at any time on Sunday. Construction hours may be extended with approval from the Executive Director of the Board of Police Commissioners. In general, the City of Los Angeles Department of Building and Safety enforces Noise Regulations relative to noise generated by operation of equipment, and the Los Angeles Police Department enforces Noise Regulations relative to noise generated by people.

In addition, Section 91.3307.1 of the LAMC (Protection Required) specifies that adjoining public and private property shall be protected from damage during construction, remodeling and demolition work. Protection must be provided for footings, foundations, party walls, chimneys, skylights and roofs.

(4) Ground-Borne Vibration

The City currently does not have any adopted standards, guidelines, or thresholds relative to ground-borne vibration. As such, available guidelines from the FTA are utilized to assess impacts due to ground-borne vibration. As discussed above, in most circumstances common ground-induced vibrations related to roadway traffic and construction activities pose no threat to buildings or structures.[18,19]

The FTA published a technical manual titled, "Transit Noise and Vibration Impacts Assessment," which provides ground-borne vibration impact criteria with respect to building damage during construction activities.[20] As discussed above, building vibration damage is measured in PPV described in the unit of inches per second. Table IV.F-4 on page IV.F-11 provides the FTA vibration criteria applicable to construction activities. According to FTA guidelines, a vibration criterion of 0.20 PPV should be considered as the significant impact level for non-engineered timber and masonry buildings. Structures or buildings constructed of reinforced concrete, steel, or timber, have a vibration damage criterion of 0.50 PPV pursuant to the FTA guidelines.

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[17] *In accordance with the Noise Regulations, "technically feasible" means that the established noise limitations can be complied with at a project site, with the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques employed during the operation of equipment.*

[18] *FTA, "Transit Noise and Vibration Impact Assessment," Chapter 5.2, September 2018.*

[19] *Caltrans, "Transportation Related Earthborne Vibrations," February 2002.*

[20] *FTA, "Transit Noise and Vibration Impact Assessment," September 2018.*

Table IV.F-4
FTA Construction Vibration Impact Criteria for Building Damage

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel or timber (no plaster)	0.50
II. Engineered concrete and masonry (no plaster)	0.30
III. Non-engineered timber and masonry buildings	0.20
IV. Buildings extremely susceptible to vibration damage	0.12

Source: Federal Transit Administration, 2018.

In addition to the FTA Construction Vibration Impact Criteria for Building Damage, the FTA guidance manual also provides vibration criteria for human annoyance for various uses. These criteria were established primarily for rapid transit (rail) projects and, as indicated in Table IV.F-5 on page IV.F-12, are based on the frequency of vibration events. Specific criteria are provided for three land use categories: (1) Vibration Category 1—High Sensitivity; (2) Vibration Category 2—Residential; and (3) Vibration Category 3—Institutional.

c. Existing Conditions

As discussed in Section II, Project Description, of this Draft EIR, the Project Site is located in a highly urbanized area. The predominant source of noise in the vicinity of the Project Site is vehicular traffic on adjacent roadways, particularly along Olympic Boulevard, which has high volumes of traffic. Other ambient noise sources in the vicinity of the Project Site include truck traffic, landscaping activities, and other miscellaneous noise sources associated with typical urban activities.

(1) Noise-Sensitive Receptors

Some land uses are considered more sensitive to intrusive noise than others based on the types of activities typically involved at the receptor location. The *L.A. CEQA Thresholds Guide* states that noise-sensitive uses include residences, transient lodgings (hotels), schools, libraries, churches, hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks.[21] Similarly, the Noise Element of the General Plan defines noise-sensitive land uses as single-family and multi-unit dwellings, long-term care facilities (including convalescent and retirement facilities), dormitories, motels, hotels,

[21] *City of Los Angeles, L.A. CEQA Thresholds Guide, p. I.1-3.*

Table IV.F-5
FTA Vibration Impact Criteria for Human Annoyance

Land Use Category	Ground-Borne Vibration Impacts Levels (VdB)		
	Frequent Events[a]	Occasional Events[b]	Infrequent Events[c]
Category 1: Building where vibration would interfere with interior operations	65[d]	65[d]	65[d]
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

[a] *"Frequent Events" are defined as more than 70 vibration events of the same source per day.*
[b] *"Occasional Events" are defined as between 30 and 70 vibration events of the same source per day.*
[c] *"Infrequent Events" are defined as fewer than 30 vibration events of the same source per day.*
[d] *This criterion limit is based on the levels that are acceptable for most moderately sensitive equipment such as optical microscopes.*
Source: Federal Transit Administration, 2018.

transient lodging, and other residential uses; houses of worship; hospitals; libraries; schools; auditoriums; concert halls; outdoor theaters; nature and wildlife preserves; and parks.[22] These uses are generally considered more sensitive to noise than commercial and industrial land uses.

Based on a review of the land uses in the vicinity of the Project Site, six noise receptor locations were selected to represent noise-sensitive uses within 500 feet of the Project Site. These locations represent areas with land uses that could qualify as noise-sensitive uses according to the definition of such uses in the *L.A. CEQA Thresholds Guide* and the General Plan. As discussed below, noise measurements were conducted for six receptor locations around the Project Site to establish baseline noise conditions in the vicinity of the Project Site. The receptor locations essentially surround the Project Site and thereby provide representative baseline noise levels for uses in all directions. The monitoring locations provide an adequate basis to evaluate potential impacts at other receptors in the same general direction of and beyond the receptor locations. The noise measurement locations are shown in Figure IV.F-1 on page IV.F-13 and described in Table IV.F-6 on page IV.F-14.

[22] *Noise Element, City of Los Angeles General Plan, Chapter IV, p. 4-1.*

LEGEND

PS - Project Site

Note: Monitoring for R1, R2 and R6 occurred on-site immediately adjacent to the receptor

Figure IV.F-1
Noise Measurement Locations

Source: Acoustical Engineering Services, 2019.

Table IV.F-6
Description of Noise Measurement Locations

Receptor Location	Description	Approximate Distance from Measurement Location to Nearest Project Site Boundary (feet)[a]	Nearest Noise-Sensitive Land Use(s)
R1	Residential use on the north side of Keswick Avenue, south of the Project Site. R1 also represents the residential use on the north side Orton Avenue.[b]	Receptor adjacent to Project Site/Noise measurement occurred on-site immediately adjacent to receptor	Residential
R2	Courtyard by Marriott (hotel use) on the south side of Olympic Avenue, northeast of the Project Site. R2 also represents the Century Park hotel on the north side of Bellwood Avenue, north of the Project Site.	Receptor adjacent to the Project Site/Noise measurement occurred on-site immediately adjacent to receptor	Hotel
R3	Residential use on the north side of Lauriston Avenue, north of the Project Site	425	Residential
R4	Residential use at the northwest corner of Kerwood Avenue and Olympic Boulevard, northwest of the Project Site	315	Residential
R5	Residential use on the west side of Kerwood Avenue (between Olympic Boulevard and Keswick Avenue), west of the Project Site	155	Residential
R6	Residential use on the east side of Kerwood Avenue (between Olympic Boulevard and Keswick Avenue), west of the Project Site	Receptor adjacent to the Project Site/Noise measurement occurred on-site immediately adjacent to receptor	Residential

[a] *Distances are estimated using Google Earth. Ambient measurements for receptors adjacent to the Project Site, R1, R2, and R6, were conducted on the Project Site, immediately adjacent to the off-site receptor locations.*

[b] *Ambient noise measurement was made at 5 feet above the existing building on the Project Site, which is at a similar elevation as receptor R1, to represent the ambient noise level at receptor R1.*

Source: Acoustical Engineering Services (AES), 2021. See Appendix F to this Draft EIR.

(2) Ambient Noise Levels

To establish baseline noise conditions, existing ambient noise levels were monitored for six off-site receptor locations (identified as R1 to R6) that are representative of sensitive uses in the vicinity of the Project Site. The baseline noise monitoring program was conducted on August 20, 2019, using a Quest Technologies Model 2900 Integrating/

Logging Sound Level Meter.[23] A 24-hour measurement was conducted for receptor location (R1) and two 15-minute measurements were conducted at the other receptor locations (R2 to R6) during daytime and nighttime hours. The daytime ambient noise levels were measured between 11:00 A.M. and 1:00 P.M., and the nighttime ambient noise levels were measured between 10:00 P.M. and 12:00 A.M. The measurement periods represent the typical average ambient noise levels during the daytime and nighttime hours. As these average ambient noise levels are used as the base for comparison, the resulting analysis is more conservative (i.e., results in greater impacts) than use of other timeframes such as during peak traffic timeframes when noise levels are higher. The ambient noise measurements were recorded in accordance with the City's standards, which require ambient noise to be measured over a period of at least 15 minutes.[24]

Table IV.F-7 on page IV.F-16 provides a summary of the ambient noise measurements conducted at the six noise receptor locations. Based on field observations, the ambient noise at the Project noise receptor locations is dominated by local traffic and, to a lesser extent, helicopter flyovers and other typical urban noises. As indicated in Table IV.F-7, the existing daytime ambient noise levels at the off-site noise receptor locations ranged from 50.8 dBA (L_{eq}) at receptor location R6 to 67.3 dBA (L_{eq}) at receptor location R4. The measured nighttime ambient noise levels ranged from 49.5 dBA (L_{eq}) at receptor location R6 to 64.2 dBA (L_{eq}) at receptor location R4. Thus, the existing ambient noise levels at all off-site locations are above the City's presumed daytime and nighttime ambient noise levels of 50 dBA (L_{eq}) and 40 dBA (L_{eq}), respectively, for residential and hotel uses, as presented above in Table IV.F-3 on page IV.F-9.

In addition to the ambient noise measurements in the vicinity of the Project Site, the existing traffic noise on local roadways in the surrounding area was calculated to quantify the 24-hour CNEL noise levels using information provided by the Traffic Study prepared for the Project and included as Appendix H of this Draft EIR. Thirteen (13) roadway segments were selected for the existing off-site traffic noise analysis included in this section based on proximity to noise-sensitive uses along the roadway segments and potential increases in traffic volumes from the Project. Traffic noise levels were calculated using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) and traffic volume data from the Traffic Study prepared for the Project. The TNM calculates the hourly L_{eq} noise levels based on specific information including the hourly traffic volume, vehicle type mix, vehicle

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[23] *This sound meter meets and exceeds the minimum industry standard performance requirements for "Type 2" standard instruments as defined in the American National Standard Institute (ANSI) S1.4. It also meets the requirement specified in Section 111.01(l) of the LAMC that instruments be "Type S2A" standard instruments or better. The sound meter was calibrated and operated according to the manufacturer's written specifications.*

[24] *LAMC Section 111.01.*

Table IV.F-7
Existing Ambient Noise Levels

Receptor Location	Noise-Sensitive Land Use	Measured Noise Levels, L_{eq} (dBA)		CNEL (24-hour)
		Daytime Hours[c] (7:00 A.M.–10:00 P.M.)	Nighttime Hours[c] (10:00 P.M.–7:00 A.M.)	
R1	Residential	56.3[b]	52.1[b]	59.8[a]
R2	Hotel	58.2	55.2	60.6
R3	Residential	56.7	55.2	60.2
R4	Residential	67.3	64.2	69.7
R5	Residential	58.8	53.1	59.6
R6	Residential	50.8	49.5	54.5

[a] *Estimated based on short-term (15-minute) noise measurement based on FTA procedures (FTA Transit Noise and Vibration Impact Assessment Manual, Appendix E Determining Existing Noise, September 2018).*

[b] *Levels shown for R1 represent the average for the entire daytime and nighttime periods.*

[c] *The range of hours for the "Daytime Hours" and "Nighttime Hours" in the table heading are defined by the LAMC. For receptor locations R2 through R6, daytime ambient noise levels were measured between 11:00 A.M. and 1:00 P.M., and the nighttime ambient noise levels were measured between 10:00 P.M. and 12:00 A.M.*

Source: AES, 2021. See Appendix F to this Draft EIR.

speed, and lateral distance between the noise receptor and the roadway. To calculate the 24-hour CNEL levels, the hourly L_{eq} levels were calculated during daytime hours (7:00 A.M. to 7:00 P.M.), evening hours (7:00 P.M. to 10:00 P.M.), and nighttime hours (10:00 P.M. to 7:00 A.M.). The TNM calculates the 24-hour CNEL noise levels based on specific information, including Average Daily Traffic (ADT); percentages of day, evening, and nighttime traffic volumes relative to ADT; vehicle speed; and distance between the noise receptor and the roadway. Vehicle mix/distribution information used in the noise calculations is typical of the project type and is shown in Table IV.F-8 on page IV.F-17.[25]

Table IV.F-9 on page IV.F-18 provides the calculated CNEL for the analyzed local roadway segments based on existing traffic volumes. As shown therein, the existing CNEL due to surface street traffic volumes ranges from 65.4 dBA CNEL along Kerwood Avenue (between Olympic Boulevard and Pico Boulevard) to 75.2 dBA CNEL along Olympic Boulevard (between Overland Avenue and Beverly Glen Boulevard). Currently, the existing traffic-related noise levels along the roadway segments of Century Park West and Kerwood Avenue fall within the conditionally acceptable noise levels for residential uses

[25] *Communication with the Project traffic consultant (Gibson Transportation Consulting, Inc.), May 2021.*

Table IV.F-8
Vehicle Mix for Traffic Noise Model

Vehicle Type	Percent of Average Daily Traffic (ADT)			Total Percent of ADT per Vehicle Type
	Daytime Hours (7 A.M.–7 P.M.)	Evening Hours (7 P.M.–10 P.M.)	Nighttime Hours (10 P.M.–7 A.M.)	
Automobile	77.6	9.7	9.7	97.0
Medium Truck[a]	1.6	0.2	0.2	2.0
Heavy Truck[b]	0.8	0.1	0.1	1.0
Total	80.0	10.0	10.0	100.0

[a] *Medium Truck—Trucks with 2 axles.*

[b] *Heavy Truck—Trucks with 3 or more axles.*

Source: AES and Gibson, 2021. See Appendix F to this Draft EIR.

(i.e., between 60 and 70 dBA CNEL). The existing traffic noise levels along Beverly Glen Boulevard, Avenue of the Stars, Motor Avenue, Santa Monica Boulevard, Olympic Boulevard (between Beverly Glen Boulevard and Avenue of the Stars), and Pico Boulevard are between 70 dBA CNEL and 75 dBA CNEL, which are considered normally unacceptable for residential uses. The existing traffic noise level along Olympic Boulevard (between Overland Avenue and Beverly Glen Boulevard) is greater than 75 dBA CNEL, which is considered clearly unacceptable for residential uses.

(3) Existing Ground-Borne Vibration Levels

Based on field observations, the primary source of existing ground-borne vibration in the vicinity of the Project Site is vehicular travel (e.g., standard cars, refuse trucks, delivery trucks, construction trucks, school buses, and buses) on local roadways. According to the FTA technical study "Federal Transit Administration: Transit Noise and Vibration Impacts Assessments," typical road traffic-induced vibration levels are unlikely to be perceptible by people. Specifically, the FTA study reports that "[i]t is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads."[26] Trucks and buses typically generate ground-borne vibration velocity levels of around 63 VdB (at 50 feet distance), and these levels could reach 72 VdB when trucks and buses pass over bumps in the road. Per the FTA, 75 VdB is the dividing line between barely perceptible (with regards to ground vibration) and distinctly perceptible.[27] Therefore,

[26] *FTA, "Transit Noise and Vibration Impact Assessment," Page 112, September 2018.*

[27] *FTA, "Transit Noise and Vibration Impact Assessment," Table 5-5, September 2018.*

Table IV.F-9
Existing Roadway Traffic Noise Levels

Roadway Segment	Adjacent Sensitive Land Use	Approximate Distance to Roadway Center Line (feet)	Calculated Traffic Noise Levels, CNEL (dBA)[a]	Noise-Sensitive Land Uses	Existing Noise Exposure Compatibility Category[b]
Beverly Glen Boulevard					
Between Santa Monica Blvd. and Olympic Blvd.	Residential	40	72.2	Yes	Normally Unacceptable
Between Olympic Blvd. and Pico Blvd.	Residential	40	71.3	Yes	Normally Unacceptable
Century Park West					
Between Santa Monica Blvd. and Olympic Blvd.	Residential	45	69.3	Yes	Conditionally Acceptable
Avenue of the Stars					
Between Santa Monica Blvd. and Olympic Blvd.	Residential	60	70.3	Yes	Normally Unacceptable
Motor Avenue					
Between Pico Blvd. and Cresta Dr.	Residential	35	71.9	Yes	Normally Unacceptable
Kerwood Avenue					
Between Olympic Blvd. and Pico Blvd.	Residential	25	65.4	Yes	Conditionally Acceptable
Santa Monica Boulevard					
Between Beverly Glen Blvd. and Century Park West	Residential	70	73.1	Yes	Normally Unacceptable
Between Century Park West and Ave. of the Stars	Residential	70	72.9	Yes	Normally Unacceptable
Olympic Boulevard					
Between Overland Ave. and Beverly Glen Blvd.	Residential	45	75.2	Yes	Clearly Unacceptable
Between Beverly Glen Blvd. and Century Park West	Residential, Hotel	50	74.6	Yes	Normally Unacceptable
Between Century Park West and Ave. of the Stars	Residential	50	74.4	Yes	Normally Unacceptable
Pico Boulevard					
Between Overland Ave. and Beverly Glen Blvd.	School, Religious	45	74.0	Yes	Normally Unacceptable
Between Beverly Glen Blvd. and Motor Ave.	School, Religious	45	73.6	Yes	Normally Unacceptable

[a] *Detailed calculation worksheets are included in Appendix F to this Draft EIR.*

[b] *Noise compatibility is based on the most stringent land use, per City's land use compatibility as provided in Table IV.F-2 on page IV.F-7.*

Source: AES, 2021.

existing ground vibration in the vicinity of the Project Site is generally below the perceptible level. However, ground vibration associated with heavy trucks traveling on road surfaces with irregularities, such as speed bumps and potholes, could reach the perceptible threshold.

3. Project Impacts

a. Thresholds of Significance

In accordance with the State CEQA Guidelines Appendix G, the Project would have a significant impact related to noise if it would result in the:

Threshold (a): Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Threshold (b): Generation of excessive groundborne vibration or groundborne noise levels?

Threshold (c): For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels?

For this analysis, the Appendix G Thresholds listed above are relied upon. The analysis utilizes factors and considerations identified in the City's 2006 *L.A. CEQA Thresholds Guide*, as appropriate, to assist in answering the Appendix G Threshold questions.

The *L.A. CEQA Thresholds Guide* identifies the following criteria to evaluate noise impacts:

(1) Construction Noise

A project would normally have a significant impact on noise levels from construction if:

- Construction activities lasting more than one day would exceed existing ambient exterior sound levels by 10 dBA (hourly L_{eq}) or more at a noise-sensitive use;

- Construction activities lasting more than 10 days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA (hourly L_{eq}) or more at a noise-sensitive use; or

- Construction activities of any duration would exceed the ambient noise level by 5 dBA (hourly L_{eq}) at a noise-sensitive use between the hours of 9:00 P.M. and 7:00 A.M. Monday through Friday, before 8:00 A.M. or after 6:00 P.M. on Saturday, or at any time on Sunday.

As discussed in Section II, Project Description, of this Draft EIR, construction of the Project is anticipated to begin in 2021 and be completed in 2023. Therefore, since construction activities would occur over a period longer than 10 days for all phases, the corresponding significance criteria used in the construction noise analysis presented in this section of the Draft EIR is an increase in the ambient exterior noise levels by 5 dBA (hourly L_{eq}) or more at a noise-sensitive use.

(2) Operational Noise

A project would normally have a significant impact on noise levels from operation if:

- The Project causes the ambient noise levels measured at the property line of affected noise-sensitive uses to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category (see Table IV.F-2 on page IV.F-7 for a description of these categories); or

- The Project causes the ambient noise levels measured at the property line of affected noise-sensitive uses to increase by 5 dBA in CNEL or greater; or

- Project-related operational on-site (i.e., non-roadway) noise sources, such as outdoor building mechanical/electrical equipment, outdoor activities, loading, trash compactor, or parking facilities, increase the ambient noise level (hourly L_{eq}) at noise-sensitive uses by 5 dBA, based on LAMC Sections 112.01.(c), 112.02.(a), 114.02.(a).3.

The significance criteria used in the noise analysis for on-site operations presented below is an increase in the ambient noise level of 5 dBA (hourly L_{eq}) at the noise-sensitive uses, in accordance with the LAMC. The LAMC does not apply to off-site traffic (i.e., vehicles traveling on public roadways). Therefore, based on the *L.A. CEQA Thresholds Guide*, the significance criteria for off-site traffic noise associated with Project operations is an increase in the ambient noise level by 3 dBA or 5 dBA in CNEL (depending on the land use noise compatibility category) at noise-sensitive uses. In addition, the significance for composite noise levels (on-site and off-site sources) is also based on the *L.A. CEQA Thresholds Guide*, which is an increase in the ambient noise level of 3 dBA or 5 dBA in

CNEL (depending on the land use noise compatibility category) for the Project's composite noise (both Project-related on-site and off-site sources) at noise-sensitive uses.

(3) Airport Noise

A project would normally have a significant impact on noise levels from airport noise if:

- Noise levels at a noise sensitive use attributable to airport operations exceed 65 dB CNEL and the project increases ambient noise levels by 1.5 dB CNEL or greater.

(4) FTA Ground-Borne Vibration Standards and Guidelines

The City currently does not have significance criteria to assess vibration impacts during construction. Thus, FTA guidelines set forth in FTA's *Transit Noise and Vibration Assessment*, dated September 2018, are used to evaluate potential impacts related to construction vibration for both potential building damage and human annoyance. The FTA guidelines regarding construction vibration are the most current guidelines and are commonly used in evaluating vibration impacts.

Based on this FTA guidance, impacts relative to ground-borne vibration associated with potential building damage would be considered significant if any of the following future events were to occur:

- Project construction activities cause ground-borne vibration levels to exceed 0.5 PPV at the nearest off-site reinforced-concrete, steel, or timber building.
- Project construction activities cause ground-borne vibration levels to exceed 0.3 PPV at the nearest off-site engineered concrete and masonry building.
- Project construction activities cause ground-borne vibration levels to exceed 0.2 PPV at the nearest off-site non-engineered timber and masonry building.
- Project construction activities cause ground-borne vibration levels to exceed 0.12 PPV at buildings extremely susceptible to vibration damage, such as historic buildings.

Based on FTA guidance, construction vibration impacts associated with human annoyance would be significant if the following were to occur (applicable to frequent events; 70 or more vibration events per day):

- Project construction activities cause ground-borne vibration levels to exceed 72 VdB at off-site residential and hotel uses, 75 VdB at institutional uses (i.e., school), or 65 VdB at off-site recording studios.

b. Methodology

(1) On-Site Construction Activities

Construction noise impacts due to on-site construction activities associated with the Project were evaluated by calculating the construction-related noise levels at representative sensitive receptor locations and comparing these estimated construction-related noise levels associated with construction of the Project to the existing ambient noise levels (i.e., noise levels without construction noise from the Project). Construction noise associated with the Project was analyzed based on the Project's potential construction equipment inventory, construction durations, and construction schedule. The construction noise model for the Project used construction equipment noise levels published by the FHWA's "Roadway Construction Noise Model (FHWA 2006)."[28] The ambient noise levels at surrounding sensitive receptor locations were based on field measurement data (see Table IV.F-7 on page IV.F-16). The construction noise levels were then calculated for sensitive receptor locations based on the standard point source noise-distance attenuation factor of 6.0 dBA for each doubling of distance (as described above in Subsection 2.a(1)(b), Outdoor Sound Propagation). Additional noise attenuation was assigned to receptor locations where the line-of-sight to the Project Site was interrupted by the presence of intervening structures.

(2) Off-Site Construction Haul Trucks

Off-site construction noise impacts from haul trucks associated with the Project were analyzed using the FHWA's TNM. The TNM is the current Caltrans standard computer noise model for traffic noise studies. The model allows for the input of roadway, noise receivers, and sound barriers, if applicable. The construction-related off-site truck volumes were obtained from the Traffic Study prepared for the Project, which is included in Appendix H to this Draft EIR. The TNM calculates the hourly L_{eq} noise levels generated by construction-related haul trucks. Noise impacts were determined by comparing the predicted noise level plus ambient with that of the existing ambient noise levels along the Project's anticipated haul routes.

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[28] *The reference noise levels for construction equipment from the FHWA are based on measurements of newer construction equipment (published in 2006), rather than the noise levels from the Environmental Protection Agency report referenced in the L.A. CEQA Thresholds Guide (published in 1971).*

(3) On-Site Stationary Noise Sources (Operation)

On-site stationary point-source noise impacts were evaluated by: (1) identifying the noise levels that would be generated by the Project's stationary noise sources, such as rooftop mechanical equipment, outdoor activities (e.g., use of the outdoor courtyard), parking facilities, and trash compactor; (2) calculating the noise level from each noise source at surrounding sensitive receptor property line locations; and (3) comparing such noise levels to ambient noise levels to determine significance. The on-site stationary noise sources were calculated using the SoundPLAN (version 8.0) computer noise prediction model.[29] SoundPLAN is widely used by acoustical engineers as a noise modeling tool for environmental noise analysis.

(4) Off-Site Roadway Noise (Operation)

As discussed in Subsection 2.c, Existing Conditions, above, off-site roadway noise was analyzed using the FHWA TNM and traffic data from the Project's Traffic Study, included as Appendix H of this Draft EIR. Roadway noise levels were calculated for various roadway segments, based on the intersection traffic volumes. Roadway noise conditions without the Project were compared to noise levels that would occur with implementation of the Project to determine Project-related noise impacts for operational off-site roadway noise.

(5) Construction Vibration

Ground-borne vibration impacts due to the Project's construction activities were evaluated by identifying potential vibration sources (i.e., construction equipment), estimating the vibration levels at the potentially affected receptor, and comparing the Project's activities to the applicable vibration significance thresholds, as described below. Vibration levels were calculated based on the FTA published standard vibration velocities for various construction equipment operations. In addition, vibration impacts are evaluated based on maximum peak vibration levels generated by each type of construction equipment, per FTA guidance.

(6) Operational Vibration

The primary source of vibration related to operation of the Project would include vehicle circulation within the proposed subterranean parking garage and off-site vehicular trips. However, as discussed above, vehicular-induced vibration is unlikely to be perceptible by people. The Project would also include typical commercial-grade stationary

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[29] *SoundPLAN GmbH, SoundPLAN version 8.0, 2017.*

mechanical equipment, such as air-condenser units (mounted at the roof level), that would include vibration-attenuation mounts to reduce the vibration transmission. The Project does not include land uses that would generate high levels of vibration. In addition, ground-borne vibration attenuates rapidly as a function of distance from the vibration source. Therefore, operation of the Project would not generate excessive ground-borne vibration in the immediate vicinity of the Project Site, and, as such, vibration impacts associated with operation of the Project would be less than significant. Accordingly, the ground-borne vibration analysis presented in this section is limited to construction activities.

c. Project Design Features

The following project design features are proposed with regard to noise and vibration:

Project Design Feature NOI-PDF-1: Power construction equipment (including combustion engines), fixed or mobile, will be equipped with state-of-the-art noise shielding and muffling devices (consistent with manufacturers' standards). All equipment will be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated. The construction contractor will keep documentation on-site demonstrating that the equipment has been maintained in accordance with manufacturer's specifications.

Project Design Feature NOI-PDF-2: All outdoor mounted mechanical equipment will be screened from off-site noise-sensitive receptors. The equipment screen shall be impermeable (i.e., solid material with minimum weight of 2 pounds per square feet) and break the line-of-sight from the equipment to the off-site noise-sensitive receptors.

Project Design Feature NOI-PDF-3: The loading dock will be screened from off-site sensitive noise receptors by the perimeter wall (ranging from approximately 4 feet to approximately 9 feet in height) at the northeastern property line and include an interior loading area (i.e., delivery vehicles would be located in the exterior loading driveway area, but unloading/loading activities would occur within an interior loading area in the ground floor of the building).

Project Design Feature NOI-PDF-4: Project construction will not include the use of driven (impact) pile systems.

Project Design Feature NOI-PDF-5: Outdoor amplified sound systems, if any, will be designed so as not to exceed the maximum noise level of 70 dBA ($L_{eq\text{-}1hr}$) at a distance of 15 feet from the amplified speaker sound systems at the Level P1 Courtyard. A qualified noise consultant will provide written documentation that the design of the system complies with this maximum noise level.

d. Analysis of Project Impacts

Threshold (a): Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

(1) Impact Analysis

(a) Construction Noise

Construction of the Project would commence with demolition of the existing buildings, parking areas, and the portion of Bellwood Avenue within the Project Site, followed by grading and excavation for the subterranean parking. Building foundations would then be constructed, followed by building construction, paving/concrete installation, and landscape installation. The Project also would include construction activities in adjacent streets associated with the water infrastructure improvements, which consists of a new water main line extending from the Project Site along Bellwood Avenue (at the east and west sides) to the north side of Olympic Boulevard. It is estimated that approximately 74,800 cubic yards of soil would be hauled from the Project Site during the demolition and excavation phase. Construction delivery/haul trucks would travel on approved truck routes between the Project Site and the San Diego Freeway (I-405) or the Santa Monica Freeway (I-10). Incoming trucks from the I-405 Freeway Southbound would exit the I-405 Freeway at Olympic Boulevard, heading north on Sawtelle Boulevard, and east on Olympic Boulevard, and turn right on Bellwood Avenue to the Project Site. Outgoing trucks to the I-405 Freeway would exit the Project Site onto Bellwood Avenue, head east on Olympic Boulevard, south on Century Park East, west on Pico Boulevard, north on Cotner Avenue to the I-405 northbound on-ramp. Incoming trucks from the I-10 Freeway Westbound would exit the I-10 Freeway at Overland Avenue, heading north on Overland Avenue, head east on Olympic Boulevard, and turn right on Bellwood Avenue to the Project Site. Outgoing trucks to the I-10 Freeway, would exit the Project Site onto Bellwood Avenue, head east on Olympic Boulevard, south on Century Park East, east on Pico Boulevard, and south on La Cienega Boulevard to the I-10 east bound on-ramp.

(i) On-Site Construction Noise

Noise impacts from Project-related construction activities occurring within or adjacent to the Project Site would be a function of the noise generated by construction equipment, the location of the equipment, the timing and duration of the noise-generating construction activities, and the relative distance to noise-sensitive receptors. Construction activities for the Project would generally include demolition, site grading and excavation for the subterranean parking garage, and building construction. Each stage of construction would involve the use of various types of construction equipment and would, therefore,

have its own distinct noise characteristics. Demolition generally involves the use of backhoes, front-end loaders, and heavy-duty trucks. Grading and excavation typically requires the use of earth-moving equipment, such as excavators, front-end loaders, and heavy-duty trucks. Building construction typically involves the use of cranes, forklifts, concrete trucks, pumps, and delivery trucks. The off-site infrastructure improvements would include the use of a backhoe/loader. Noise from construction equipment would generate both steady-state and episodic noise that could be heard within and adjacent to the Project Site.

As provided in Project Design Feature NOI-PDF-1 above, construction equipment would have proper noise muffling devices per the manufacturer's standards. Individual pieces of construction equipment anticipated to be used during construction of the Project could produce maximum noise levels (L_{max}) of 74 dBA to 90 dBA at a reference distance of 50 feet from the noise source, as shown in Table IV.F-10 on page IV.F-27. These maximum noise levels would occur when equipment is operating under full power conditions (i.e., the equipment engine at maximum speed). However, equipment used on construction sites often operates under less than full power conditions, or part power. To more accurately characterize construction-period noise levels, the average (hourly L_{eq}) noise level associated with each construction phase is calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction phase.[30] These noise levels are typically associated with multiple pieces of equipment operating on part power, simultaneously.

Table IV.F-11 on page IV.F-28 provides the estimated construction noise levels for various construction phases at the six off-site noise-sensitive receptor locations. To present a conservative impact analysis, the estimated noise levels were calculated for a scenario in which all pieces of construction equipment were assumed to operate simultaneously and be located at the construction area nearest to the affected receptors. These assumptions represent the worst-case noise scenario because construction activities would typically be spread out throughout the Project Site, and, thus, some equipment would be farther away from the affected receptors. In addition, the noise modeling assumes that construction noise is constant, when, in fact, construction activities and associated noise levels are periodic and fluctuate based on the construction activities.

As discussed above, since construction activities would occur over a period longer than 10 days for all phases, the corresponding significance criteria used in the construction noise analysis is when the construction-related noise exceeds the ambient L_{eq} noise level

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[30] *Pursuant to the FHWA Roadway Construction Noise Model User's Guide, 2006, the usage factor is the percentage of time during a construction noise operation that a piece of construction is operating at full power.*

Table IV.F-10
Construction Equipment Noise Levels

Equipment	Estimated Usage Factor[a] (%)	Typical Noise Level at 50 feet from Equipment, dBA (L_{max})
Air Compressor	40	78
Cement and Mortar Mixer	50	80
Concrete Mixer Truck	40	79
Concrete Saw	20	90
Crane	16	81
Drill Rig	20	84
Forklift	20	75
Generator	50	81
Grader	40	85
Dump/Haul Truck	40	76
Excavator	40	81
Paver	50	77
Pump	50	81
Roller	20	80
Rubber Tired Loader	40	79
Tractor/Loader/Backhoe	40	80
Delivery Truck	40	74
Welders	40	74

[a] *Usage factor represents the percentage of time the equipment would be operating at full speed.*
Source: FHWA Roadway Construction Noise Model User's Guide, 2006.

of 5 dBA at a noise-sensitive use. As indicated in Table IV.F-11 on page IV.F-28, the estimated noise levels during all stages of Project construction combined without mitigation would exceed the significance criteria at all the representative off-site receptor locations. The estimated construction-related noise would exceed the significance threshold by a range of 0.2 dBA at the uses represented by receptor location R4 to up to 41.7 dBA at the uses represented by receptor location R6, prior to implementation of mitigation. **Therefore, temporary noise impacts associated with the Project's on-site construction would be significant without mitigation measures.**

(ii) Off-Site Construction Noise

In addition to on-site construction noise sources, other noise sources may include materials delivery, concrete mixing, and haul trucks (construction trucks), as well as construction worker vehicles accessing the Project Site during construction. Typically,

Table IV.F-11
Construction Noise Impacts Prior to Mitigation Measures

Off-Site Receptor Location	Approximate Distance from Receptor to Project Construction Area (feet)	Estimated Construction Noise Levels by Construction Phases (L_{eq} (dBA))								Existing Daytime Ambient Noise Levels (L_{eq} (dBA))	Significance Criteria (L_{eq} (dBA))[a]	Maximum Noise Exceedance Above the Criteria (L_{eq} (dBA))	Sig. Impact Without Mitigation?
		Site Prep/ Demo	Grading	Mat Foundation	Foundation/ Concrete	Building Const.	Finishes/ Arch. Coating	Paving/ Landscape	Off-Site Infrastructure				
R1	10[b]	97.5	92.5	89.2	97.2	97.4	88.5	94.4	60.4	56.3	61.3	36.2	Yes
R2	10[b]	97.5	92.5	89.2	97.2	97.4	88.5	94.4	83.0	58.2	63.2	34.3	Yes
R3	425	70.0	66.7	63.5	68.6	67.6	62.2	66.0	60.9	56.7	61.7	8.3	Yes
R4	315	72.5	69.2	66.0	71.0	70.1	64.9	68.5	63.0	67.3	72.3	0.2	Yes
R5	155	69.9	64.8	61.5	66.4	66.0	59.9	64.3	51.0	58.8	63.8	6.1	Yes
R6	10[b]	97.5	92.5	89.2	97.2	97.4	88.5	94.4	67.4	50.8	55.8	41.7	Yes

[a] *Significance criteria are equivalent to the measured daytime ambient noise levels (see Table IV.F-7 on page IV.F-16) plus 5 dBA, per the L.A. CEQA Thresholds Guide for construction activities lasting longer than 10 days in a three-month period. If the estimated construction noise levels exceed those significance criteria, a construction-related noise impact is identified.*

[b] *Although the receptor is adjacent to the Project Site, noise levels are calculated at 10 feet distance, as minimum distance between the noise source (i.e., construction equipment) and the receptor.*

[c] *Estimated construction noise levels do not take any credit for noise reduction associated with Project Design Feature NOI-PDF-1 but assume the construction equipment includes the manufacturer's provided muffling device.*

Source: AES, 2021. See Appendix F to this Draft EIR.

construction trucks generate higher noise levels than construction worker vehicles. The major noise sources associated with off-site construction trucks would be from the delivery/concrete/haul trucks. As described above, construction delivery/haul trucks would travel between the Project Site and I-405 via Sawtelle Boulevard, Olympic Boulevard, Bellwood Avenue, Century Park East, Pico Boulevard, and Cotner Avenue or between the Project and I-10 via Overland Avenue, Olympic Boulevard, Bellwood Avenue, Century Park East, Pico Boulevard, and La Cienega Boulevard. There are no noise sensitive uses along the segments of Sawtelle Boulevard and Cotner Avenue that would be utilized.

As discussed in Section IV.I, Transportation, of this Draft EIR, the peak period of construction with the highest number of construction trucks would occur during the mat foundation phase, which would occur over a limited number of days (approximately 1 to 3 days). Table IV.F-12 on page IV.F-30 provides the estimated number of construction-related truck trips for the various construction phases, including haul/concrete/material delivery trucks and worker vehicles, and the estimated noise levels along the anticipated truck route(s). As shown in Table IV.F-12, the maximum number of hourly trucks along the haul routes would be associated with the mat foundation and grading and excavation phases of construction. Specifically, a maximum of 13 concrete and haul truck roundtrips would occur hourly during these phases. As the inbound and outbound routes would be different, a maximum of 13 hourly truck trips would occur along each haul route. As indicated in Table IV.F-12, the hourly noise levels generated by construction trucks during all stages of Project construction would be below the significance criteria of a 5-dBA increase over the ambient noise level. **Therefore, noise impacts from off-site construction traffic would be less than significant.**

(iii) Summary of Construction Noise Impacts

As discussed above, temporary noise impacts associated with the Project's on-site construction activities would be significant, although the noise impacts associated with off-site construction traffic would be less than significant. **Therefore, without mitigation measures, Project on-site construction activities would result in the generation of a substantial temporary increase in ambient noise levels in the vicinity of the Project in excess of significance criteria established by the City.**

(b) Operational Noise

This section provides a discussion of potential operational noise impacts on nearby noise-sensitive receptors. Specific operational noise sources addressed herein include: (a) on-site stationary noise sources, including outdoor mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC] equipment), activities within the proposed outdoor spaces (e.g., outdoor courtyards, terraces, and roof level deck), parking facilities, loading dock, and trash compactor; and (b) off-site mobile (roadway traffic) noise sources.

Table IV.F-12
Off-Site Construction Truck Noise Levels

Construction Phase	Estimated Number of Construction and Delivery Trucks/ Worker Trips per Day	Estimated Number of Construction Truck/Worker Trips per Hour[b]	Estimated Truck Noise Levels Plus Ambient Along the Project Truck Routes,[a] (L_{eq} (dBA)) (Project/Project + Ambient)				
			Olympic Boulevard	Century Park East	Pico Boulevard	Overland Avenue	La Cienega Boulevard
Site Prep/Demo	30/30	2/12	58.0/67.8	57.3/62.9	57.3/66.4	58.0/63.7	57.3/65.3
Grading	172/30[e]	13/12	65.3/69.4	64.6/66.3	64.6/68.3	65.3/67.1	64.6/67.6
Mat Foundation	400/30[f]	13/12	65.3/69.4	64.6/66.3	64.6/68.3	65.3/67.1	64.6/67.6
Foundation/Concrete	100/100	7/40	63.4/68.8	62.7/65.2	62.7/67.5	63.4/65.9	62.7/66.8
Building Construction	50/180	4/72	62.6/68.6	61.8/64.7	61.8/67.3	62.6/65.5	61.8/66.4
Finishes/Architectural Coating	50/200	4/80	62.8/68.6	62.0/64.8	62.0/67.3	62.8/65.6	62.0/66.5
Paving/Landscaping	20/40	2/16	58.3/67.8	57.6/63.0	57.6/66.4	58.3/63.8	57.6/65.4
Existing Ambient Noise Levels Along the Project Haul Routes, L_{eq} (dBA)[c]			67.3	61.5	65.8	62.3	64.6
Significance Criteria, L_{eq} (dBA)[d]			72.3	66.5	70.8	67.3	69.6
Significant Impact?			No	No	No	No	No

[a] *Noise levels include Project-related truck trips plus ambient.*

[b] *Based on input from the Project Applicant, a maximum of 13 concrete or haul trucks can be accommodated at the Project Site in a given hour. For construction trucks in the remaining phases, the number of hourly trips assumes a uniform distribution of trips over the workday and is then divided by two, as incoming and departing trucks would travel on different roadways. For worker vehicles, the number of hourly assumes 40% of the worker trips would arrive in one hour to represent a conservative analysis.*

[c] *Ambient noise levels along the truck routes are based on measurements at nearby receptor locations (i.e., receptor R4 along Olympic Boulevard). Ambient noise levels along Century Park East, Pico Boulevard, Overland Avenue, and La Cienega Boulevard are based on measured ambient at receptor R4, adjusted for the existing traffic volumes along the roadway segments.*

[d] *Significance criteria are equivalent to the ambient noise levels plus 5 dBA.*

[e] *The 172 truck trips includes 162 haul truck trips and 10 delivery truck trips. Based on input from the Project Applicant, a maximum of 13 haul truck roundtrips can be accommodated within a given hour. Thus, should haul trucks be limited to a six hour period, the 162 daily haul truck roundtrips is overstated.*

Table IV.F-12 (Continued)
Off-Site Construction Truck Noise Levels

Construction Phase	Estimated Number of Construction and Delivery Trucks/ Worker Trips per Day	Estimated Number of Construction Truck/Worker Trips per Hour[b]	Estimated Truck Noise Levels Plus Ambient Along the Project Truck Routes,[a] (L_{eq} (dBA)) (Project/Project + Ambient)				
			Olympic Boulevard	Century Park East	Pico Boulevard	Overland Avenue	La Cienega Boulevard

[f] *Based on input from the Project Applicant, a maximum of 13 concrete truck roundtrips can be accommodated at the Project Site within a given hour. As such, the 200 estimated daily concrete truck roundtrips over an approximate 12-hour period is conservative overestimation.*

Source: AES, 2021. See Appendix F to this Draft EIR.

(i) On-Site Stationary Noise Sources

Mechanical Equipment

As part of the Project, new mechanical equipment (e.g., air ventilation equipment) would be located at the roof level and within the building structure (e.g., garage exhaust fans). Although operation of this equipment would generate noise, Project-related outdoor mechanical equipment would be designed so as not to increase the existing ambient noise levels by 5 dBA in accordance with the City's Noise Regulations. Specifically, the Project would comply with LAMC Section 112.02, which prohibits noise from air conditioning, refrigeration, heating, pumping, and filtering equipment from exceeding the ambient noise levels on the premises of other occupied properties by more than 5 dBA. In addition, as provided above in Project Design Feature NOI-PDF-2, all outdoor mounted mechanical equipment would be screened from off-site noise-sensitive receptors. Table IV.F-13 on page IV.F-33 presents the estimated noise levels at the off-site receptor locations from operation of the Project mechanical equipment.

As indicated in Table IV.F-13, the estimated noise levels from the mechanical equipment would range from 36.4 dBA (L_{eq}) at receptor location R3 to 53.9 dBA (L_{eq}) at receptor location R1, which would be consistent with the existing ambient noise levels. As such, the estimated ambient noise levels at all off-site receptor locations with the addition of the Project's mechanical equipment would be below the significance criteria of 5 dBA (L_{eq}) above ambient noise levels (based on the lowest measured ambient). **Therefore, noise impacts from mechanical equipment would be less than significant.**

Outdoor Spaces

As discussed in Section II, Project Description, of this Draft EIR, the Project would include a series of landscaped courtyards and terraces at every floor of the building. The outdoor open space areas would include a central courtyard at the P1 level (which may include features such as outdoor kitchenette and barbecue stations, exercise lawn, garden seating area, flexible lounge seating, and outdoor dining seating) and outdoor terraces at the ground through the sixth level. Noise sources associated with outdoor uses typically include noise from people gathering and conversing. For this operational noise analysis, reference noise levels of 65 dBA for a male and 62 dBA for a female speaking in a raised voice were used for analyzing potential noise impacts from people gathering at the outdoor spaces.[31] In order to analyze a typical noise scenario, it was assumed that up to 50 percent of the people (half of which would be male and the other half female) would be

[31] *Cyril M. Harris, Handbook of Acoustical Measurements and Noise Control, Third Edition, 1991, Table 16.1.*

Table IV.F-13
Estimated Noise Levels from Mechanical Equipment

Receptor Location	Existing Ambient Noise Levels, dBA (L_{eq})	Estimated Noise Levels from Mechanical Equipment, dBA (L_{eq})	Ambient + Project Noise Levels, dBA (L_{eq})	Significance Criteria, dBA (L_{eq})[a]	Exceedance over Significance Criteria	Significant Impact?
R1	52.1	53.9	56.1	57.1	0.0	No
R2	55.2	41.8	55.4	60.2	0.0	No
R3	55.2	36.4	55.3	60.2	0.0	No
R4	64.2	38.3	64.2	69.2	0.0	No
R5	53.1	43.9	53.6	58.1	0.0	No
R6	49.5	41.6	50.2	54.5	0.0	No

[a] *Significance criteria are equivalent to the measured daytime or nighttime ambient noise levels, whichever is lower (see Table IV.F-7 on page IV.F-16) plus 5 dBA, per the City of Los Angeles Noise Regulations. The lower nighttime ambient noise levels are used, to provide a conservative analysis. If the estimated noise levels exceed those significance criteria, a noise impact is identified.*

Source: AES, 2021. See Appendix F to this Draft EIR.

talking at the same time. In addition, as show in Table IV.F-14 on page IV.F-34, the hours of operation for use of the outdoor areas were assumed to be from 7:00 A.M. to 9:00 P.M. and the estimated number of people was based on the maximum occupancy per the Building Code for each area of outdoor space.

An additional potential noise source associated with outdoor uses would be the use of an outdoor sound system (e.g., music or other sounds broadcast through an outdoor mounted speaker system) at the P1 Level Courtyard. As set forth in Project Design Feature NOI-PDF-5, if an amplified sound system is used in outdoor areas, it would be designed so as not to exceed the maximum noise level of 70 dBA L_{eq} at a distance of 15 feet from the amplified speaker sound system, thereby ensuring that the amplified sound system would not exceed the significance criteria (i.e., an increase of 5 dBA L_{eq}) at any off-site noise-sensitive receptor location.

Table IV.F-15 on page IV.F-35 presents the estimated noise levels at the off-site sensitive receptors resulting from the use of outdoor areas. The estimated noise levels were calculated with the assumption that all of the outdoor spaces would be fully occupied, based on the maximum occupancy per the Building Code for the area of each outdoor space, and that all outdoor spaces would be operating concurrently to represent a worst-case noise analysis. As presented in Table IV.F-15, the estimated noise levels from the outdoor spaces would range from 27.6 dBA (L_{eq}) at receptor location R3 to 58.8 dBA (L_{eq}) at receptor location R1. The estimated ambient noise levels with the addition of

Table IV.F-14
Outdoor Areas - Maximum Occupancy Per Building Code and Amplified Sound System Noise Levels

Outdoor Space	Number of People[a]	Amplified Sound System Level dBA (L_{eq})
Level P1—Courtyard	433	70 dBA at 15 feet
Level 1—Terraces	522	N/A
Level 2—Terraces	128	N/A
Level 3—Terraces	50	N/A
Level 4—Balconies	100	N/A
Level 5—Balconies	50	N/A
Level 6—Balconies	162	N/A

N/A = Not Applicable

[a] *Based on maximum 15 square feet per person, per Building Code. This a conservative overestimation based on anticipated usage.*

Source: AES, 2020.

the noise levels generated by the Project's outdoor spaces would be below the significance criteria of 5 dBA (L_{eq}) above ambient noise levels (based on the measured daytime ambient noise level) at all off-site receptor locations. **As such, noise impacts from the use of the outdoor spaces would be less than significant.**

Parking Facilities

As discussed in Section II, Project Description, of this Draft EIR, the Project would provide 140 vehicular parking spaces, within two subterranean parking levels. Sources of noise within the parking garage would primarily include vehicular movements and engine noise, doors opening and closing, and intermittent car alarms. Since the subterranean parking levels would be fully enclosed on all sides, noise generated within the subterranean parking garage would be effectively shielded from off-site sensitive receptor locations in the immediate vicinity of the Project Site. **Therefore, noise impacts from the parking facilities would be less than significant.**

Loading Dock and Trash Collection Areas

The Project loading areas and trash compactors would be located inside the building at Level 1. The exterior loading drive would be partially covered by the second floor of the building above, and the perimeter wall at the northeastern property line would provide additional screening. Delivery vehicles would access the property from the service drive off of Bellwood Avenue, and pull into an exterior loading drive adjacent to the building.

Table IV.F-15
Estimated Noise Levels from Outdoor Uses

Receptor Location	Existing Ambient Noise Levels (dBA (L_{eq}))	Estimated Noise Levels from Outdoor Uses (dBA (L_{eq}))	Ambient + Project Noise Levels (dBA (L_{eq}))	Significance Criteria[a]	Exceedance over Significance Criteria	Significant Impact?
R1	56.3	58.8	60.7	61.3	0.0	No
R2	58.2	46.3	58.5	63.2	0.0	No
R3	56.7	27.6	56.7	61.7	0.0	No
R4	67.3	40.5	67.3	72.3	0.0	No
R5	58.8	40.2	58.9	63.8	0.0	No
R6	50.8	41.9	51.3	55.8	0.0	No

[a] *Significance criteria are equivalent to the measured daytime ambient noise levels (see Table IV.F-7 on page IV.F-16) plus 5 dBA, per the City of Los Angeles Noise Regulations. If the estimated noise levels exceed those significance criteria, a noise impact is identified.*

Source: AES, 2021. See Appendix F to this Draft EIR.

Delivery vehicles would remain in the exterior loading drive, but would back up to the loading dock to the interior loading area. Unloading/loading activities would occur within the interior loading area in the ground floor of the building. Noise sources associated with the loading dock and trash collection area would include delivery/trash collection trucks and operation of the trash compactor. Based on measured noise levels from typical loading dock facilities and trash compactors, delivery/trash collection trucks and trash compactors could generate noise levels of approximately 69 dBA (L_{eq}) and 66 dBA (L_{eq}), respectively, at a distance of 50 feet.[32] As provided above in Project Design Feature NOI-PDF-3, a perimeter wall would provide screening of the loading dock from off-site noise-sensitive receptors. In addition, the trash compactors would be located inside an enclosed room, which would be effectively shielded to the off-site sensitive receptors. Table IV.F-16 on page IV.F-36 presents the estimated noise levels at the off-site receptor locations from operation of the loading dock and trash compactor. As indicated in Table IV.F-16, the estimated noise from the loading dock and trash compactor would be below the significance criteria of 5 dBA (L_{eq}) above ambient noise levels. **Therefore, noise impacts from loading dock and trash compactor operations would be less than significant.**

[32] *RK Engineering Group, Inc., Wal-Mart/Sam's Club Reference Noise Level Study, 2003.*

Table IV.F-16
Estimated Noise Levels from Loading Dock

Receptor Location	Existing Ambient Noise Levels (dBA (L_{eq}))	Estimated Noise Levels from Loading Dock and Trash Compactor (dBA (L_{eq}))	Ambient + Project Noise Levels (dBA (L_{eq}))	Significance Criteria[a]	Exceedance over Significance Criteria	Significant Impact?
R1	56.3	24.5	56.3	61.3	0.0	No
R2	58.2	60.0	62.2	63.2	0.0	No
R3	56.7	21.4	56.7	61.7	0.0	No
R4	67.3	12.1	67.3	72.3	0.0	No
R5	58.8	21.4	58.8	63.8	0.0	No
R6	50.8	24.0	50.8	55.8	0.0	No

[a] *Significance criteria are equivalent to the measured daytime ambient noise levels (see Table IV.F-7 on page IV.F-16) plus 5 dBA, per the City of Los Angeles Noise Regulations. If the estimated noise levels exceed those significance criteria, a noise impact is identified.*

Source: AES, 2021. See Appendix F to this Draft EIR.

(ii) Off-Site Mobile Noise Sources

Future Plus Project

As discussed in the Traffic Study, the Project is expected to have a net reduction of 75 daily trips, as compared to the existing conditions. As such, Project-related traffic would not increase the existing traffic volumes along the roadway segments in the study area when compared with Future Without Project conditions or Existing Plus Project conditions. **Therefore, traffic noise impacts related to Project operations would be less than significant.**

(iii) Composite Noise Level Impacts from Project Operations

In addition to considering the potential noise impacts to neighboring noise-sensitive receptors from each specific on-site and off-site noise source (e.g., mechanical equipment, outdoor areas including amplified sound, parking facilities, loading dock and trash compactor, and off-site traffic), an evaluation of potential composite noise level increases (i.e., noise levels from all on-site noise sources combined, including amplified music) at the analyzed sensitive receptor locations was also performed. As analyzed above, with regard to noise related to off-site traffic, the Project would result in a net reduction of 75 daily trips. Therefore, the evaluation of composite noise levels is limited to all on-site Project-related noise sources. The analysis uses the CNEL noise metric to determine the contributions at the noise-sensitive receptor locations in the vicinity of the Project Site.

Table IV.F-17 on page IV.F-38 presents the estimated composite noise levels in terms of CNEL at the off-site sensitive receptor locations from the Project-related noise sources. As indicated in Table IV.F-17, the Project would result in an increase in composite noise levels ranging from 0.1 dBA at receptor location R3 to 4.5 dBA at receptor location R1, and no increase at receptor location R4. The composite noise level from Project operation at all off-site receptor locations would be below the 5-dBA significance criteria as the ambient plus Project composite noise level falls within the normally and conditionally acceptable (less than 70 CNEL) range for the residential and hotel land use categories. **As such, composite noise level impacts due to Project operations would be less than significant.**

Based on the above, Project operations would not result in the generation of a substantial permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the City's general plan or noise ordinance, or applicable standards of other agencies. Therefore, the Project's operational noise impacts from on- and off-site sources would be less than significant.

Table IV.F-17
Composite Noise Impacts

Receptor Location	Existing Ambient Noise Levels (CNEL (dBA)) (A)	Calculated Project-Related Noise Sources (CNEL (dBA))			Project Composite Noise Levels (CNEL (dBA)) (E=B+C+D)[b]	Ambient Plus Project Composite Noise Levels (CNEL (dBA)) (G=A+E)[b]	Increase in Noise Levels due to Project (CNEL (dBA)) (G-A)	Sig. Criteria[a] (CNEL (dBA))	Sig. Impact?
		Mechanical (B)	Loading/ Trash Compactor (C)	Outdoor Spaces (D)					
R1	59.8	60.6	21.8	57.6	62.4	64.3	4.5	64.8	No
R2	60.6	48.5	57.2	45.1	57.9	62.5	1.9	65.6	No
R3	60.2	43.1	18.8	26.5	43.2	60.3	0.1	65.2	No
R4	69.7	45.0	10.9	39.3	46.0	69.7	0.0	74.7	No
R5	59.6	50.6	18.8	39.0	50.9	60.1	0.5	64.6	No
R6	54.5	48.3	21.3	40.7	49.0	55.5	1.0	59.5	No

[a] *Significance criteria are equivalent to the existing ambient plus 3 dBA if the estimated noise levels (ambient plus Project) fall within the "normally unacceptable" or "clearly unacceptable" land use categories or ambient plus 5 dBA if the estimated noise levels fall within the "normally acceptable" or "conditionally acceptable" land use categories, per the City of Los Angeles Noise Element. If the estimated noise levels exceed those significance criteria, a noise impact is identified.*

[b] *Adding sound levels in dB are calculated based on energy (logarithmic) basis.*

Source: AES, 2021. See Appendix F to this Draft EIR.

(2) Mitigation Measures

(a) On-Site Construction Noise

As analyzed above, construction of the Project would have the potential to result in significant noise impacts at the off-site sensitive receptor locations from on-site construction activities. Therefore, the following mitigation measure is provided to reduce construction-related noise impacts:

Mitigation Measure NOI-MM-1: Prior to the start of demolition activities, a temporary and impermeable sound barrier shall be erected and maintained at the locations listed below and shown in Figure IV.F-2 on page IV.F-40 during earthmoving and exterior construction of the Project building. At plan check, building plans shall include documentation prepared by a noise consultant verifying compliance with this measure.

- Along the northern property line of the Project Site between the construction areas and the Century Park hotel on the north side of Bellwood Avenue and the Courtyard by Marriott on the east side of Bellwood Avenue (receptor location R2), and the residential use on the north side of Lauriston Avenue (receptor location R3). The temporary sound barrier shall be designed to provide a minimum 15-dBA noise reduction at the ground level of the Century Park hotel and the Courtyard by Marriott (receptor location R2), and minimum 9-dBA noise reduction at the residential use on Lauriston Avenue (receptor location R3).
- Along the northwestern property line of the Project Site between the construction areas and residential use at the northwest corner of Olympic Boulevard and Kerwood Avenue (receptor location R4). The temporary sound barrier shall be designed to provide a minimum 5-dBA noise reduction at the ground level of receptor location R4.
- Along the western property line of the Project Site between the construction areas and the residential uses on Kerwood Avenue (receptor locations R5 and R6). The temporary sound barrier shall be designed to provide a minimum 7-dBA noise reduction at the ground level of receptor location R5 and a minimum 15-dBA noise reduction at the ground level of receptor location R6.
- Along the southern property line of the Project Site between the construction areas and the residential uses on Keswick Avenue (receptor location R1). The temporary sound barrier shall be designed to provide a minimum 15-dBA noise reduction at the ground level of receptor location R1.

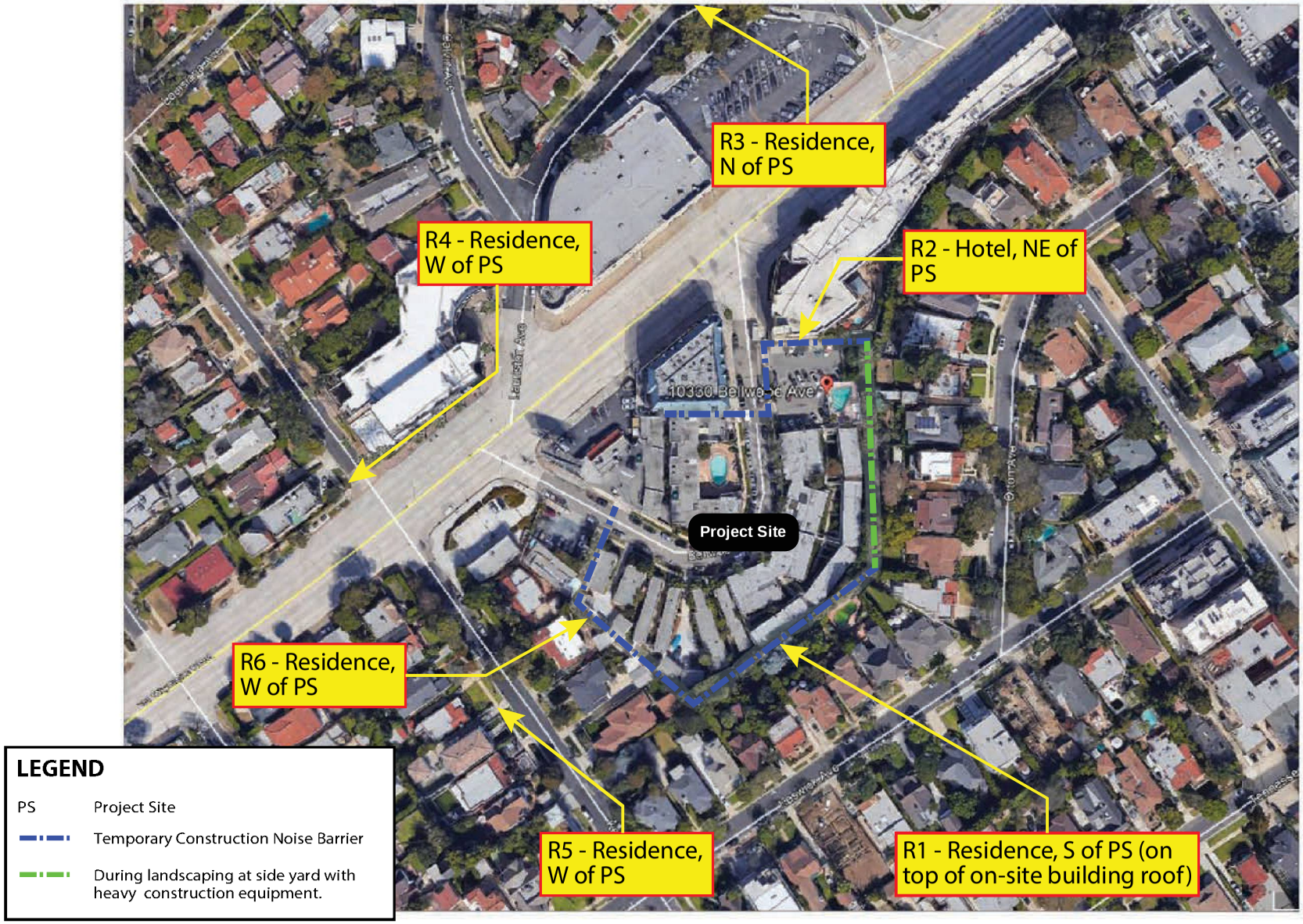

Figure IV.F-2

Temporary Construction Noise Barrier Locations

Source: Acoustical Engineering Services, 2019.

- In the event landscaping of the side yard along the eastern property line adjacent to the residential uses along Orton Avenue utilizes heavy construction equipment (e.g., large bulldozer and excavator), a temporary sound barrier at the side yard elevation shall be designed to provide a minimum 15-dBA noise reduction at the ground level of the residential uses along Orton Avenue.

(3) Level of Significance After Mitigation

(a) On-Site Construction Noise

Implementation of Mitigation Measure NOI-MM-1 provided above would reduce the Project's construction noise levels to the extent feasible. Specifically, implementation of Mitigation Measure NOI-MM-1 (installation of temporary sound barrier) would reduce the noise generated by on-site construction activities at the off-site sensitive uses at the ground level by a minimum 15 dBA at the residential uses along Keswick Avenue and Orton Avenue (receptor location R1), 15 dBA at the Courtyard by Marriott and Century Park hotels adjacent to the Project Site to the east and north, respectively (receptor location R2), by a minimum 9 dBA at the residential uses on Lauriston Avenue (receptor location R3), 5 dBA at the residential uses at the northwest corner of Olympic Boulevard and Kerwood Avenue (receptor location R4), by a minimum 7 dBA at the residential uses on Kerwood Avenue (receptor location R5), and 15 dBA at the ground level of the residential uses on Kerwood Avenue (receptor location R6).[33] As presented in Table IV.F-18 on page IV.F-42, the estimated construction-related noise levels at off-site sensitive receptor locations R3, R4, and R5 would be reduced to below a level of significance with implementation of Mitigation Measure NOI-MM-1. However, the estimated construction-related noise levels would still exceed the significance thresholds at receptor locations R1, R2 and R6. There are no other feasible mitigation measures that could be implemented to reduce the temporary noise impacts from on-site construction at receptor locations R1, R2 and R6. **Therefore, construction noise impacts associated with on-site noise sources would remain significant and unavoidable.**

(b) Off-Site Construction Noise

As discussed above, the short-term noise impacts associated with off-site construction traffic would be less than significant. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

[33] *15 dBA is the typical maximum noise reduction provided by temporary construction noise barrier.*

Table IV.F-18
Construction Noise Impacts With Mitigation Measures

Off-Site Recep-tor Loca-tion	Minimum Noise Reduction Provided by Mitigation Measures[b] (dBA)	Estimated Construction Noise Levels by Construction Phases (L_{eq} (dBA))								Existing Daytime Ambient Noise Levels (L_{eq} (dBA))	Sig. Criteria (L_{eq} (dBA))[a]	Maximum Noise Exceed-ance Above the Criteria (L_{eq} (dBA))	Sig. Impact With Mitiga-tion?
		Site Prep/ Demo	Grading	Mat Founda-tion	Founda-tion/Con-crete	Building Const.	Finishes/ Arch. Coating	Paving/ Land-scape	Off-Site Infra-structure				
R1	15	82.5	77.5	74.2	82.2	82.4	73.5	79.4	55.4	56.3	61.3	21.2	Yes
R2	15	82.5	77.5	74.2	82.2	82.4	73.5	79.4	83.0[d]	58.2	63.2	19.8[c]	Yes
R3	9	61.0	57.7	54.5	59.6	58.6	53.2	57.0	60.9[d]	56.7	61.7	0.0	No
R4	5	67.5	64.2	61.0	66.0	65.1	59.9	63.5	63.0[d]	67.3	72.3	0.0	No
R5	7	62.9	57.8	54.5	59.4	59.0	52.9	57.3	51.0	58.8	63.8	0.0	No
R6	15	82.5	77.5	74.2	82.2	82.4	73.5	79.4	57.4	50.8	55.8	26.7	Yes

[a] *Significance criteria are equivalent to the measured daytime ambient noise levels (see Table IV.F-7 on page IV.F-16) plus 5 dBA, per the L.A. CEQA Thresholds Guide for construction activities lasting longer than 10 days in a three-month period. If the estimated construction noise levels exceed those significance criteria, a construction-related noise impact is identified.*

[b] *Noise reduction provided by temporary noise barrier along the Project boundaries.*

[c] *Noise barriers would not be effective in reducing the on-site construction noise at the upper levels of the Courtyard by Marriott and Century Park hotels (receptor R2). Therefore, on-site construction noise impacts would remain significant and unavoidable. On-site construction noise levels shown for R2 are for the ground level of the building only.*

[d] *Noise levels due to off-site infrastructure at receptors R2, R3 and R4 would not be affected by mitigation measures, as construction activities would occur within the public right-of-way.*

Source: AES, 2021. See Appendix F to this Draft EIR.

(c) Operational Noise

Noise impacts associated with on-site noise sources and off-site traffic during Project operations would be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (b): Would the Project result in the generation of excessive groundborne vibration or groundborne noise levels?

(1) Impact Analysis

(a) Construction

Construction activities can generate varying degrees of ground vibration, depending on the construction procedures and the type of construction equipment used. The operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies, depending on soil type, ground strata, and construction characteristics of the receptor buildings. The results from vibration can range from no perceptible effects at the lowest vibration levels to low rumbling sounds and perceptible vibration at moderate levels. However, ground-borne vibrations from construction activities rarely reach levels that damage structures.

(i) Building Damage Impacts from On-Site Construction

With regard to potential building damage, the Project would generate ground-borne construction vibration during building demolition and site excavation/grading activities when heavy construction equipment, such as large bulldozers, drill rigs, and loaded trucks, would be used. The FTA has published standard vibration velocities for various construction equipment operations. Table IV.F-19 on page IV.F-44 provides the estimated ground vibration velocity levels (in terms of inch per second PPV) at the nearest off-site structures to the Project Site. It is noted that since impact pile driving methods would not be used during construction of the Project, in accordance with Project Design Feature NOI-PDF-4 provided above, impact pile driving vibration is not included in the on-site construction vibration analysis. Installation of piles for shoring and foundation would utilize drilling methods to minimize vibration generation.

As discussed in the Initial Study included in Appendix A of this Draft EIR, there are no historical resources buildings located on or adjacent to the Project Site. However, the streetlights along Olympic Boulevard (in the vicinity of the Project Site) are identified as historical resources. These streetlights are located more than 25 feet from the Project construction area. As such, the streetlights would be exposed to a ground-borne vibration

Table IV.F-19
Construction Vibration Impacts—Building Damage Without Mitigation

Nearest On- and Off-Site Building Structure[a]	Distance Between the Construction Equipment and Off-Site Buildings (feet)	Estimated Vibration Velocity Levels at the Outside of and Adjacent to the Nearest Off-Site Structures from the Project Construction Equipment (inch/second (PPV))[b]					Significance Criteria (PPV)	Significant Impact?
		Large Bulldozer	Caisson Drilling	Loaded Trucks	Jack-hammer	Small Bulldozer		
FTA Reference Vibration Levels at 25 feet	25	0.089	0.089	0.076	0.035	0.003	—	—
Four-story Courtyard by Marriott hotel at 10320 Olympic Boulevard adjacent to the Project site to the northeast	10	0.244	0.244	0.208	0.096	0.008	0.5[d]	No
Single- and two-story residential buildings along Orton Avenue, southeast of the Project Site	30	0.068	0.068	0.058	0.027	0.002	0.2[c]	No
Single- and two-story residential buildings along Keswick Avenue, south of the Project Site	30	0.068	0.068	0.058	0.027	0.002	0.2[c]	No
Single-story residential buildings (garages) along Kerwood Avenue, west of the Project Site	5	0.523	0.523	0.446	0.206	0.048	0.2[c]	Yes
Single-story commercial building at 10390 Bellwood Avenue adjacent to the Project Site to the northwest	5	0.523	0.523	0.446	0.206	0.023	0.2[c]	Yes
Single-story commercial building at 10344 Olympic Boulevard adjacent to the Project Site to the north	5	0.523	0.523	0.446	0.206	0.048	0.2[c]	Yes
Four-story Century Park hotel at 10330 Olympic Boulevard adjacent to the Project site to the north	5	0.523	0.523	0.446	0.206	0.018	0.5[d]	Yes

Table IV.F-19 (Continued)|
Construction Vibration Impacts—Building Damage Without Mitigation

Nearest On- and Off-Site Building Structure[a]	Distance Between the Construction Equipment and Off-Site Buildings (feet)	Estimated Vibration Velocity Levels at the Outside of and Adjacent to the Nearest Off-Site Structures from the Project Construction Equipment (inch/second (PPV))[b]					Significance Criteria (PPV)	Significant Impact?
		Large Bulldozer	Caisson Drilling	Loaded Trucks	Jack-hammer	Small Bulldozer		

[a] *Represents off-site building structures located nearest to the Project Site to the north, south, east, and west.*
[b] *Vibration level calculated based on FTA reference vibration level at 25 foot distance.*
[c] *FTA criteria for non-engineered timber and masonry buildings.*
[d] *FTA criteria for reinforced-concrete, steel or timber buildings.*
Source: FTA, 2006; AES, 2021. See Appendix F to this Draft EIR.

level of up to 0.089 PPV (see Table IV.F-19 on page IV.F-44). The estimated vibration levels due to the construction activities would be well below the 0.12 PPV significance criteria, applicable to buildings extremely susceptible to vibration damage, such as, historic structures). Therefore, vibration impacts associated with Project construction in the vicinity of the historic streetlights along Olympic Boulevard would be less than significant.

The assessment of construction vibration provided below for potential building damage due to on-site construction compares the estimated vibration levels generated during construction of the Project to the 0.2 PPV significance criteria for a non-engineered timber and masonry building (applicable to the off-site single- and two-story buildings surrounding the Project Site) and the 0.5 PPV significance criteria for reinforced-concrete, steel and timber building (applicable to the off-site four-story hotel buildings). As indicated in Table IV.F-19, without mitigation, the estimated vibration levels from the construction equipment would exceed the 0.2 PPV building damage significance criteria at the residential buildings (garages) along Kerwood Avenue and the commercial buildings along Bellwood Avenue and Olympic Boulevard and the 0.5 PPV building damage significance criteria at the Century Park Hotel. **Therefore, the on-site vibration impacts during construction of the Project, pursuant to the significance criteria for building damage, would be significant without mitigation measures.**

(ii) Human Annoyance Impacts from On-Site Construction

Table IV.F-20 on page IV.F-47 provides the estimated vibration levels at the off-site sensitive uses due to construction equipment operation and compares the estimated vibration levels to the specified significance criteria for human annoyance. Per FTA guidance, the significance criteria for human annoyance is 72 VdB for sensitive uses, including residential (receptor locations R1, R3 to R6) and hotel (receptor location R2) uses, assuming there are a minimum of 70 vibration events occurring during a typical construction day. As indicated in Table IV.F-20, the estimated ground-borne vibration levels from construction equipment would be below the significance criteria for human annoyance at off-site sensitive receptor locations R3 through R5. The estimated ground-borne vibration levels at receptor locations R1, R2 and R6 without mitigation would exceed the 72 VdB significance criteria during the demolition and grading/excavation phases with large construction equipment (i.e., large bulldozer, caisson drilling and loaded trucks) operating within 80 feet of receptor locations R1, R2 and R6. **Therefore, on-site vibration impacts during construction of the Project, pursuant to the significance criteria for human annoyance, would be significant without mitigation measures.**

(iii) Building Damage and Human Annoyance Impacts from Off-Site Construction

As described above, construction delivery/haul trucks would travel between the Project Site and I-405 via Sawtelle Boulevard, Olympic Boulevard, Bellwood Avenue,

Table IV.F-20
Construction Vibration Impacts—Human Annoyance Without Mitigation

Off-Site Receptor Location	Estimated Vibration Velocity Levels at the Off-Site Sensitive Uses Due to On-Site Construction Equipment Operation[a] (VdB)					Significance Criteria (VdB)	Sig. Impact?
	Large Bulldozer	Caisson Drilling	Loaded Trucks	Jack-hammer	Small Bulldozer		
FTA Reference Vibration Levels at 25 feet	87	87	86	79	58	—	—
R1	85	85	84	77	56	72	Yes
R2	99	99	98	91	70	72	Yes
R3	50	50	49	42	21	72	No
R4	54	54	53	46	25	72	No
R5	63	63	62	55	34	72	No
R6	94	94	93	86	65	72	Yes

[a] *Vibration levels calculated based on FTA reference vibration level at 25 distance,*
Source: FTA, 2018; AES, 2021. See Appendix F to this Draft EIR.

Century Park East, Pico Boulevard, and Cotner Avenue or between the Project and I-10 via Overland Avenue, Olympic Boulevard, Bellwood Avenue, Century Park East, Pico Boulevard, and La Cienega Boulevard. There are no vibration sensitive uses along Sawtelle Boulevard and Cotner Avenue. Heavy-duty construction trucks would generate ground-borne vibration as they travel along the Project's anticipated haul routes. Thus, an analysis of potential vibration impacts using the building damage and human annoyance criteria for ground-borne vibration along the anticipated local haul routes was conducted.

Regarding building damage, based on FTA data, the vibration generated by a typical heavy-duty truck would be approximately 63 VdB (0.00566 PPV) at a distance of 50 feet from the truck.[34] According to the FTA "[i]t is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads." Nonetheless, there are existing buildings along the Project's anticipated haul routes that are situated approximately 20 feet from the right-of-way and would be exposed to ground-borne vibration levels of approximately 0.022 PPV, as provided in the noise calculation worksheets included in Appendix F to this Draft EIR. This estimated vibration generated by construction trucks traveling along the anticipated haul routes would be well below the most stringent building damage criteria of 0.12 PPV for buildings extremely susceptible to vibration. **Therefore, vibration impacts (pursuant to the significance criteria for**

[34] *FTA, "Transit Noise and Vibration Impact Assessment," Figure 5-4, September 2018.*

building damage) from off-site construction activities (i.e., construction trucks traveling on public roadways) would be less than significant.

As discussed above, per FTA guidance, the significance criteria for human annoyance is 72 VdB for sensitive uses, including residential and hotel uses. It should be noted that buses and trucks rarely create vibration that exceeds 70 VdB at 50 feet from the receptor unless there are bumps in the road.[35] Vibration sensitive uses along Olympic Boulevard include residential, hotel and studio (Fox Studios) uses. These residential and hotel uses are located approximately 20 feet from Olympic Boulevard. The studio uses (at Fox Studios) are located approximately 60 feet from the route. As indicated in the noise calculation worksheets included in Appendix F to this Draft EIR, the temporary vibration levels could reach approximately 75 VdB and 61 VdB periodically as trucks pass sensitive receptors along Olympic Boulevard at 20 feet and 60 feet, respectively. The residential and hotel uses along Olympic Boulevard would be exposed to ground-borne vibration levels up to 75 VdB, which would exceed the 72-VdB significance criteria from the construction trucks. The estimated ground-borne vibration at the Fox Studios (studios facing Olympic Boulevard) of 61 VdB would be below the 65-VdB significance threshold for studio uses. Vibration sensitive uses along Century Park East include residential uses, which are located approximately 30 feet from the roadway, which would be exposed to ground-borne vibration of 70 VdB and would be below the 72-VdB significance threshold. Vibration sensitive uses along Pico Boulevard include school and studio (Fox Studios) uses, which are located approximately 25 feet and 80 feet, respectively. The estimated ground-borne vibration from construction trucks would be 72 VdB (at the school use) and 57 VdB (at the studio uses), which would be below the 75-VdB and 65-VdB significance thresholds, respectively. There are residential and motel uses located approximately 25 feet along Overland Avenue and La Cienega Boulevard, respectively. The estimated ground-borne vibration at these sensitive uses would 72 VdB, which would be at the 72-VdB significance criteria. In addition, as discussed above, the temporary vibration levels from construction trucks passing residential and hotel uses along Olympic Boulevard could exceed the significance criteria. **As such, potential vibration impacts with respect to human annoyance that would result from temporary and intermittent off-site vibration from construction trucks traveling along the anticipated haul routes would be significant without mitigation measures.**

(iv) Summary of Construction Vibration Impacts

As discussed above, the estimated vibration levels from on-site construction equipment without mitigation would exceed the building damage significance criteria of 0.2 PPV at the residential buildings (garages) along Kerwood Avenue and the commercial

[35] *FTA, "Transit Noise and Vibration Impact Assessment," Page 113, September 2018.*

buildings along Bellwood Avenue and Olympic Boulevard and the 0.5 PPV at the four-story Century Park hotel adjacent to the Project Site to the north and northeast. In addition, the estimated vibration levels from on-site construction equipment would exceed the human annoyance significance criteria of 72 VdB at the off-site residential and hotel uses adjacent to the Project Site. Therefore, vibration impacts from on-site construction activities would be significant pursuant to the significance criteria for building damage and human annoyance significance criteria without mitigation.

Vibration impacts associated with temporary and intermittent vibration from off-site construction activities (i.e., construction trucks traveling along the anticipated haul routes) would be less than significant with respect to building damage; however, vibration impacts from off-site construction activities would be significant with respect to the significance criteria for human annoyance.

(b) Operation Vibration Impacts

As described above, sources of vibration related to operation of the Project would include vehicle circulation, delivery trucks, and building mechanical equipment. As also discussed above, vehicular-induced vibration, including vehicle circulation within the subterranean parking area, would not generate perceptible vibration levels at off-site sensitive uses. Building mechanical equipment installed as part of the Project would include typical commercial-grade stationary mechanical equipment, such as air-condenser units (mounted at the roof level), that would include vibration-attenuation mounts to reduce vibration transmission so vibration would not be perceptible at the off-site sensitive receptors. **Therefore, operation of the Project would not result in the generation of excessive ground-borne vibration levels that would be perceptible in the vicinity of the Project Site. As such, vibration impacts associated with operation of the Project would be less than significant.**

(2) Mitigation Measures

(a) *Construction Vibration*

As analyzed above, construction of the Project would have the potential to result in significant vibration impacts with respect to potential damage to adjacent buildings from Project construction. Therefore, the following mitigation measures are provided to reduce the vibration impacts associated with potential building damage:

Mitigation Measure NOI-MM-2: The use of large construction equipment (i.e., large bulldozer, caisson drill rig, and/or loaded trucks) shall be a minimum of: 13 feet away from the residences abutting the Project Site on the east side of Kerwood Avenue, 13 feet away from the commercial buildings (located at 10390 Bellwood Avenue and 10344 Olympic

Boulevard) adjacent to the Project Site, and 6 feet away from the Century Park hotel.

Mitigation Measure NOI-MM-3: The use of jackhammers will be a minimum of 6 feet away from the residences abutting the Project Site on the east side of Kerwood Avenue and the commercial buildings located at 10390 Bellwood Avenue and 10344 Olympic Boulevard.

Vibration impacts from on-site and off-site construction activities would be significant pursuant to the significance criteria for human annoyance. Mitigation measures considered to reduce vibration impacts from on-site construction activities with respect to human annoyance included the installation of a wave barrier, which is typically a trench or a thin wall made of sheet piles installed in the ground (essentially a subterranean sound barrier to reduce noise). However, wave barriers must be very deep and long to be effective, are cost prohibitive for temporary applications such as construction, and therefore are considered infeasible.[36] In addition, constructing a wave barrier to reduce the Project's construction-related vibration impacts would, in and of itself, generate ground-borne vibration from the excavation equipment. In addition, it would not be feasible to install a wave barrier along the public roadways for the off-site construction vibration impacts. As such, there are no feasible mitigation measures to reduce the potential vibration human annoyance impacts.

(b) Operation Vibration Impacts

As discussed above, operation of the Project would not result in a significant vibration impact during operation and no mitigation measures are required.

(3) Level of Significance After Mitigation

(a) Construction Vibration

Implementation of Mitigation Measure NOI-MM-2 and Mitigation Measure NOI-MM-3 provided above would reduce the Project's construction vibration impacts to the buildings adjacent to the Project Site, including the residential buildings garages) at the residences abutting the Project Site on the east side of Kerwood Avenue, the commercial buildings (located at 10390 Bellwood Avenue and 10344 Olympic Boulevard), and the Century Park hotel at 10330 Olympic Boulevard, to a less than significant level. As presented in Table IV.F-21 on page IV.F-51, the estimated construction-related vibration levels at off-site building structures would be reduced to below a level of significance with implementation of Mitigation Measure NOI-MM-2 and Mitigation Measure NOI-MM-3.

[36] *Caltrans, Transportation- and Construction-Induced Vibration Guidance Manual, June 2004.*

Table IV.F-21
Construction Vibration Impacts—Building Damage with Mitigation

Nearest On- and Off-Site Building Structure[a]	Distance Between the Construction Equipment and Off-Site Buildings (feet)	Estimated Vibration Velocity Levels at the Outside of and Adjacent to the Nearest Off-Site Structures from the Project Construction Equipment (inch/second (PPV))[b]					Significance Criteria (PPV)	Significant Impact?
		Large Bulldozer	Caisson Drilling	Loaded Trucks	Jack-hammer	Small Bulldozer		
FTA Reference Vibration Levels at 25 feet	25	0.089	0.089	0.076	0.035	0.003	—	—
Four-story Courtyard by Marriott hotel at 10320 Olympic Boulevard adjacent to the Project site to the northeast	10	0.244	0.244	0.208	0.096	0.008	0.5[d]	No
Single- and two-story residential buildings along Orton Avenue, southeast of the Project Site	30	0.068	0.068	0.058	0.027	0.002	0.2[c]	No
Single- and two-story residential buildings along Keswick Avenue, south of the Project Site	30	0.068	0.068	0.058	0.027	0.002	0.2[c]	No
Single-story residential buildings (garages) along Kerwood Avenue, west of the Project Site	13	0.183	0.183	0.156	0.168	0.048	0.2[c]	No
Single-story commercial building at 10390 Bellwood Avenue adjacent to the Project Site to the northwest	13	0.183	0.183	0.156	0.168	0.023	0.2[c]	No
Single-story commercial building at 10344 Olympic Boulevard adjacent to the Project Site to the north	13	0.183	0.183	0.156	0.168	0.048	0.2[c]	No
Four-story Century Park hotel at 10330 Olympic Boulevard adjacent to the Project site to the north	5	0.428	0.425	0.446	0.206	0.018	0.5[d]	No

Table IV.F-21 (Continued)|
Construction Vibration Impacts—Building Damage with Mitigation

Nearest On- and Off-Site Building Structure[a]	Distance Between the Construction Equipment and Off-Site Buildings (feet)	Estimated Vibration Velocity Levels at the Outside of and Adjacent to the Nearest Off-Site Structures from the Project Construction Equipment (inch/second (PPV))[b]					Significance Criteria (PPV)	Significant Impact?
		Large Bulldozer	Caisson Drilling	Loaded Trucks	Jack-hammer	Small Bulldozer		

[a] *Represents off-site building structures located nearest to the Project Site to the north, south, east, and west.*
[b] *Vibration level calculated based on FTA reference vibration level at 25 foot distance.*
[c] *FTA criteria for non-engineered timber and masonry buildings.*
[d] *FTA criteria for reinforced-concrete, steel or timber buildings.*
Source: FTA, 2006; AES, 2021. See Appendix F to this Draft EIR.

Mitigation measures considered to reduce vibration impacts from on-site and off-site construction activities with respect to human annoyance included the installation of a wave barrier, as discussed above. However, as discussed above, wave barriers must be very deep and long to be effective and are not considered cost effective for temporary applications, such as construction. Further, construction of the wave barriers themselves would generate ground borne vibrations. In addition, it would be technically infeasible along the haul routes, as these are miles of public right of way. Thus, there are no feasible mitigation measures that could be implemented to reduce the temporary vibration impacts from on-site and off-site construction associated with human annoyance to a less-than-significant level. **Therefore, Project vibration impacts from on-site and off-site construction activities with respect to human annoyance would remain significant and unavoidable.**

(b) Operation Vibration

As discussed above, vibration impacts associated with Project operation were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (c): For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

As discussed in Section IV, Other CEQA Considerations, of this Draft EIR, and evaluated in the Initial Study prepared for the Project, included as Appendix A of this Draft EIR, the Project Site is not located within the vicinity of a private airstrip or an airport land use plan or within 2 miles of an airport. Thus, the Project would not expose people residing or working in the project area to excessive airport-related noise levels. The nearest airport is the Santa Monica Airport located approximately 2.8 miles southwest of the Project Site. Since the Project is not located within an airport land use plan, within 2 miles of a public airport or public use airport, or within the vicinity of a private airstrip, impacts with regard to airport-related noise would not occur. **Therefore, there would be no impacts with respect to Threshold (c). No further analysis is required.**

e. Cumulative Impacts

(1) Impact Analysis

The Project, together with the related projects and future growth, could contribute to cumulative noise impacts. The potential for cumulative noise impacts to occur is specific to

the distance between each related project and their stationary noise sources, as well as the cumulative traffic that these projects would add to the surrounding roadway network.

(a) Construction Noise

(i) On-Site Construction Noise

As indicated in Section III, Environmental Setting, of this Draft EIR, six related projects have been identified in the vicinity of the Project Site. Noise from construction of development projects is typically localized and has the potential to affect noise-sensitive uses within 500 feet from the construction site, based on the *L.A. CEQA Thresholds Guide* screening criteria. Thus, noise from construction activities for two projects within 1,000 feet of each other can contribute to a cumulative noise impact for receptors located midway between the two construction sites. Related Project Nos. 1 through 5 are located a minimum 1,700 feet from the Project Site and are shielded from the Project Site by intervening buildings. Therefore, Related Project Nos. 1 through 5 would not contribute to cumulative construction noise impacts, in the event of concurrent construction. However, the Related Project No. 6 is approximately 375 feet from the Project Site to the east, which could contribute to cumulative construction noise impacts.

The Related Project No. 6 (Fox Studios Master Plan) is a studio development with approximately 1.1 million square feet of additional buildings proposed.[37] There are noise sensitive receptors located within 500 feet of Related Project No. 6 and the Project Site, including the single-family residential uses along Orton Avenue (represented by receptor location R1), the Courtyard by Marriott on Olympic Boulevard (represented by receptor location R2), and the single-family residential uses along Lauriston Avenue and Fox Hills Drive (represented by receptor location R3). As analyzed above in Subsection 2.c.(2) (see Table IV.F-11 on page IV.F-28), the estimated Project-related construction noise levels at the uses represented by receptor location R1 would exceed the significance criteria by up to 36.2 dBA during the demolition phase, prior to mitigation and 21.2 dBA with mitigation. Since Related Project No. 6 has a direct line-of-sight to the residential uses along Orton Avenue, there is a potential for cumulative construction noise impacts to occur at the uses represented by receptor location R1 in the event Project construction occurs concurrently with construction of Related Project No. 6. Receptor locations R2 and R3 are shielded to the Related Project No. 6 construction by existing intervening buildings. However, since the estimated Project-related construction noise levels at receptor location R2 would exceed the significance criteria by up to 19.8 dBA with mitigation and the Project-related construction noise with mitigation at receptor R3 would be just below the significance criteria, any additional noise contribution from the Related Project No. 6 would have the

[37] *City of Los Angeles, Fox Studios Master Plan, Initial Study, April 2016.*

potential to contribute to the cumulative construction noise impacts. Therefore, cumulative noise impacts from on-site construction would be significant at receptor locations R1, R2 and R3. Receptor locations R4, R5 and R6 are located a minimum of 850 feet from the Related Project No. 6 and are also shielded by intervening buildings. Therefore, cumulative impacts from concurrent construction would not occur at receptor locations R4, R5 and R6.

Construction-related noise levels from the related projects would be intermittent and temporary and it is anticipated that, as with the Project, the related projects would comply with the construction hours and other relevant provisions set forth in the LAMC. Noise associated with cumulative construction activities would be reduced to the degree reasonably and technically feasible through proposed mitigation measures for each individual related project and compliance with locally adopted and enforced noise ordinances. Based on the above, there would be potential cumulative noise impacts at the nearby sensitive uses (e.g., residential uses) located in proximity to the Project Site and Related Project No. 6, in the event of concurrent construction activities. **As such, cumulative noise impacts from on-site construction would be significant.**

(ii) Off-Site Construction Noise

In addition to the cumulative impacts of on-site construction activities, off-site construction haul trucks would have a potential to result in cumulative impacts if the trucks for the related projects and the Project were to utilize the same haul routes. The Related Project No. 6 could utilize the same truck routes (i.e., Olympic Boulevard, Century Park East, Pico Boulevard, Overland Avenue, or La Cienega Boulevard) as the Project. Therefore, any additional number of trucks from the Project and the Related Project No. 6 (if there is concurrent construction) would incrementally increase the noise levels. Based on the estimated lowest existing ambient noise level of 65.8 dBA along Pico Boulevard (see Table IV.F-12 on page IV.F-30), it is estimated that up to 37 truck trips per hour could occur along Pico Boulevard without exceeding the significance criteria of 5 dBA increase over the ambient noise levels. Therefore, if the total number of trucks from the Project and related projects were to add up to 38 truck trips per hour along Pico Boulevard, the estimated noise level from 38 truck trips per hour plus the ambient would be 70.8 dBA, which would increase the ambient noise levels by 5 dBA and exceed the significance criteria.[38] Since the Project would generate up to 13 truck trips per hour, an additional 25 truck trips from the Related Project No. 6 would increase the ambient noise level by 5 dBA or more along Pico Boulevard and Olympic Boulevard. Similarly, it is estimated that if the

[38] *It is estimated that with 38 truck trips, the noise level along Pico Boulevard would be 69.1 dBA, when added to the existing ambient of 65.8 dBA the cumulative noise levels would be 70.8 dBA, which would exceed the ambient by 5.0 dBA.*

Project and related projects were to add up to 29 and 44 construction-related truck trips per hour along La Cienega Boulevard and Olympic Boulevard, respectively, the estimated cumulative noise would increase the ambient by 5 dBA and significance criteria. Therefore, cumulative noise due to construction truck traffic from the Project and other related projects has the potential to increase the ambient noise levels along the truck route by 5 dBA. **As such, cumulative noise impacts from off-site construction could be significant.**

(iii) Summary of Cumulative Construction Noise Impacts

As discussed above, cumulative on-site and off-site construction activities from the Project and related projects have the potential to result in generation of noise levels in excess of standards established by the City. **Therefore, cumulative noise impacts from on-site and off-site construction activities would be significant.**

(b) Operational Noise

The Project Site and surrounding area have been developed with uses that have previously generated, and will continue to generate, noise from a number of community noise sources, including mechanical equipment (e.g., HVAC systems), outdoor activity areas, and vehicle travel. Similar to the Project, each of the related projects that have been identified in the vicinity of the Project Site would also generate stationary-source and mobile-source noise due to ongoing day-to-day operations. All related projects are of a residential, retail, commercial, or institutional nature, and these uses are not typically associated with excessive exterior noise levels. However, each project would produce traffic volumes that are capable of generating roadway noise impacts. The potential cumulative noise impacts associated with on- and off-site noise sources are addressed below.

(i) On-Site Stationary Noise Sources

Due to provisions set forth in the LAMC that limit stationary source noise from items, such as rooftop mechanical equipment, noise levels would be less than significant at the property line for each related project. In addition, as discussed above, noise impacts associated with operations within the Project Site would be less than significant. **Therefore, based on the distance of the related projects from the Project Site and the operational noise levels associated with the Project, cumulative stationary source noise impacts associated with operation of the Project and related projects would be less than significant**.

(ii) Off-Site Mobile Noise Sources

The related projects and future growth would result in an increase of traffic volumes in the vicinity of the Project. However, as discussed above, the Project would result in a

reduction of daily trips as compared to the existing conditions. As such, the Project would not contribute to cumulative traffic noise impacts.

Therefore, cumulative noise impacts due to off-site mobile noise sources associated with the Project, future growth, and related projects would be less than significant.

(iii) Summary of Cumulative Operational Noise Impacts

As discussed above, the Project and related projects would not result in the exposure of persons to or generation of noise levels in excess of the significance criteria established by the City or in a substantial permanent increase in ambient noise levels in the vicinity of the Project Site above levels existing without the Project and the related projects. **Therefore, cumulative operational noise impacts from on-site and off-site sources would be less than significant.**

(c) Construction Vibration

(i) On-Site Construction Vibration

As previously discussed, ground-borne vibration generated by man-made activities (e.g., road traffic, construction operations) typically weakens with greater horizontal distance away from the source of the vibration. Potential vibration impacts due to construction activities are generally limited to buildings/structures that are located in proximity to the construction site (i.e., within 20 feet as related to building damage and 80 feet as related to human annoyance at residential uses).[39] As indicated above, the closest related project, Related Project No. 6, is approximately 375 feet east of the Project Site. Therefore, based on distance attenuation potential cumulative vibration impacts with respect to the building damage from the Project and Related Project No. 6 would be less than significant. **Therefore, the Project would not contribute to a cumulative construction vibration impact with respect to building damage associated with on-site construction and the cumulative impact would be less than significant.**

As discussed above, potential vibration impacts associated with Project-related on-site construction activities would be significant with respect to human annoyance at receptor location R2 (closest sensitive receptor between the Project and the Related Project No. 6). Related Project No. 6 is approximately 375 feet from the receptor location R2. Due to the rapid attenuation characteristics of ground-borne vibration, Related Project No. 6 would not contribute to the cumulative construction vibration impact with respect to

[39] *Distances calculated based on estimated vibration levels for typical construction equipment at a distance which would be below the 72 VdB significance threshold with respect to human annoyance and 0.12 PPV significance threshold applicable to buildings extremely susceptible to vibration damage.*

human annoyance at the uses represented by receptor location R2. **Therefore, potential cumulative construction vibration impact with respect to human annoyance associated with on-site construction would be less than significant.**

(ii) Off-Site Construction Vibration

As previously discussed, based on FTA data, the vibration generated by a typical heavy truck would be approximately 63 VdB (0.00566 PPV) at a distance of 50 feet from the truck.[40] In addition, according to the FTA "[i]t is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads." As discussed above, there are existing buildings that are approximately 20 feet from the right-of-way of the anticipated haul routes for the Project. These buildings are anticipated to be exposed to ground-borne vibration levels of approximately 0.022 PPV. Trucks from the related projects are expected to generate similar ground-borne vibration levels. Therefore, the vibration levels generated from off-site construction trucks associated with the Project and other related projects along the anticipated haul routes would be below the most stringent building damage significance criteria of 0.12 PPV for buildings extremely susceptible to vibration. **Therefore, potential cumulative vibration impacts with respect to building damage from off-site construction would be less than significant.**

As discussed above, potential vibration impacts associated with temporary and intermittent vibration from project-related construction trucks traveling along the anticipated haul routes would be significant with respect to human annoyance. As related projects would be anticipated to use similar trucks as the Project, it is anticipated that construction trucks would generate similar vibration levels along the anticipated haul routes. **Therefore, to the extent that other related projects use the same haul route as the Project, potential cumulative vibration impacts with respect to human annoyance associated with temporary and intermittent vibration from haul trucks traveling along the designated haul route(s) would be significant.**

(iii) Summary of Cumulative Construction Vibration Impacts

As discussed above, due to the rapid attenuation characteristics of ground-borne vibration and given the distance of the nearest related project to the Project Site, there is no potential for a cumulative construction vibration impact with respect to building damage associated with ground-borne vibration from on-site sources. In addition, potential cumulative vibration impacts with respect to building damage from off-site construction would be less than significant. **Therefore, on-site and off-site construction activities**

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[40] *FTA, "Transit Noise and Vibration Impact Assessment," Figure 5-4, September 2018.*

associated with the Project and related projects would not generate excessive ground-borne vibration levels with respect to building damage.

Cumulative construction vibration impacts from on-site construction activities pursuant to the significance criteria for human annoyance would be less than significant in the event concurrent construction of the Project and the related projects were to occur. However, to the extent that other related projects use the same haul route(s) as the Project, potential cumulative human annoyance impacts associated with temporary and intermittent vibration from haul trucks traveling along the designated haul route(s) would be significant. **Therefore, on-site construction activities would not generate excessive ground-borne vibration levels with respect to human annoyance that would result in cumulative vibration impacts. However, cumulative vibration impacts with respect to human annoyance associated with off-site construction activities would be significant.**

(d) Operational Vibration

Vibration levels from project operation are generally limited to building mechanical equipment and vehicle circulations and would be limited to immediate vicinity of the project sites. The related projects (mixed-use and commercial developments) would generate similar vibration levels as the Project. As described above, the nearest related project is approximately 375 feet from the Project Site. Since ground-borne vibration decreases rapidly with distance, operation of the related projects would not contribute to cumulative vibration impacts due to distance between the Project and the related projects. As analyzed above, the Project operation would not result in the generation of excessive ground-borne vibration levels that would be perceptible in the vicinity of the Project Site. **Therefore, based on the distance of the related projects from the Project Site and the operational vibration levels associated with the Project, cumulative vibration impacts associated with operation of the Project and related projects would be less than significant**.

(2) Mitigation Measures

(a) Construction Noise

As analyzed above, there would be potential cumulative noise impacts at the nearby sensitive uses (e.g., residential uses) located in proximity to the Project Site and Related Project No. 6, in the event of concurrent construction activities. Noise associated with cumulative construction activities would be reduced to the degree reasonably and technically feasible through proposed mitigation measures (e.g., providing temporary noise barriers) for each individual related project. However, even with these mitigation measures cumulative noise impacts would continue to occur and there are no other physical

mitigation measures that would be feasible. As such, cumulative on-site noise impacts from on-site construction would be significant.

As analyzed above, cumulative noise impacts associated with off-site construction trucks from the Project and other related projects could occur. Conventional mitigation measures, such as providing temporary noise barrier walls to reduce the off-site construction truck traffic noise impacts, would not be feasible as the barriers would obstruct the access and visibility to the properties along the anticipated truck routes. There are no other feasible mitigation measures to reduce the temporary significant noise impacts associated with the cumulative off-site construction trucks. As such, cumulative off-site noise impacts from construction would be significant.

(b) Operational Noise

As discussed above, operation of the Project and related projects would not result in a significant noise impact during operation and no mitigation measures are required.

(c) Construction Vibration

Cumulative vibration impacts with respect to building damage associated with on-site and off-site construction activities would be less than significant. However, it is anticipated that cumulative vibration levels from off-site construction trucks would exceed the significance criteria for human annoyance at vibration sensitive receptors along the anticipated construction routes. There are no feasible mitigation measures to reduce the potential cumulative vibration human annoyance impacts. Even though impacts would be temporary, intermittent, and limited to daytime hours when haul trucks are traveling within 20 feet of a sensitive receptor, cumulative vibration impacts from off-site construction with respect to human annoyance would remain significant and unavoidable.

(d) Operational Vibration

Cumulative vibration impacts associated with operation of the Project and related projects would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance after Mitigation

(a) Construction Noise

Cumulative construction noise impacts associated with on-site noise sources and off-site construction traffic would remain significant and unavoidable.

(b) Operational Noise

Cumulative impacts related to operational noise would be less than significant. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

(c) Construction Vibration

Cumulative vibration impacts associated with respect to building damage from on-site and off-site construction activities would be less than significant. Therefore, no mitigation measures were required or included, and the impact level remains less than significant. However, cumulative vibration impacts associated with human annoyance from construction trucks would be significant and unavoidable.

(d) Operational Vibration

Cumulative impacts related to operational vibration would be less than significant. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

IV. Environmental Impact Analysis

G. Population and Housing

1. Introduction

This section of the Draft EIR focuses on whether the Project would displace housing or residents necessitating replacement housing elsewhere. The potential for the Project to cause growth that exceeds projected or planned growth directly or indirectly was evaluated in the Initial Study prepared for the Project, included in Appendix A of this Draft EIR. As such, no further evaluation of the Project's potential impacts associated with consistency with projected or planned growth is provided herein.

2. Environmental Setting

a. Regulatory Framework

(1) State

(a) California Government Code Sections 65583 and 65584(a)(1)

Section 65583 of the California Government Code requires cities and counties to prepare a housing element, as one of seven state-mandated elements of the General Plan, with specific direction on its content. Pursuant to Section 65584(a)(1), the California Department of Housing and Community Development (HCD) reviews every local government's housing element to determine whether it complies with state law. HCD is responsible for determining the regional housing needs assessment (segmented by income levels) for each region's planning body known as a council of governments (COG), the Southern California Association of Governments (SCAG) being the COG serving the Southern California area. HCD prepares an initial housing needs assessment and then coordinates with each COG in order to arrive at the final regional housing needs assessment. To date, there have been four previous housing element update cycles. California is now in its fifth housing element update cycle. The SCAG Regional Housing Needs Assessment (RHNA) and the City's General Plan Housing Element are discussed further below.

(b) The Sustainable Communities and Climate Protection Act of 2008 (SB 75, Steinberg)

Senate Bill 375 (Chapter 728, Statutes of 2008) (SB 375) established mechanisms for the development of regional targets for reducing greenhouse gas (GHG) emissions from passenger vehicles and light duty trucks. Under SB 375, the regional GHG reduction targets for passenger vehicles and light-duty trucks guide the regional Metropolitan Planning Organization (MPOs) in the preparation of growth forecasts for population, households and employment. Under SB 375, the GHG-reduction target must be incorporated within that region's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). As discussed further below, SCAG's RTP/SCS provides a vision for transportation throughout the region for the next 25 years that achieves the statewide GHG-reduction targets; and in so doing identifies the amount and location of growth expected to occur within the region.

(2) Regional

(a) Southern California Association of Governments (SCAG)

SCAG is the federally designated Metropolitan Planning Organization for six Southern California counties (Ventura, Orange, San Bernardino, Riverside, Imperial, and Los Angeles). SCAG is responsible for developing plans for transportation, growth management, hazardous waste management, and a regional growth forecast that is a foundation for these plans and for regional air quality plans developed by the South Coast Air Quality Management District (SCAQMD). SCAG prepares several plans to address regional growth, including the RHNA and the RTP/SCS, along with its associated regional growth forecast for the SCAG region and its subregions. The Project Site is located within the Los Angeles Subregion.

(b) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

In April 2016, SCAG's Regional Council adopted the 2016–2040 RTP/SCS. The 2016–2040 RTP/SCS presents the transportation vision for the region through the year 2040 and provides a long-term investment framework for addressing the region's transportation and related challenges. The 2016–2040 RTP/SCS contains baseline projections of population, households, and employment at the regional, county, and local jurisdictional levels. The 2016 RTP/SCS identifies the amount of expected growth in the region and provides the expected distribution of that growth, which reflects goals cited in the 2016 RTP/SCS. These goals seek to align the plan investments and policies with improving regional economic development and competitiveness; maximize mobility and accessibility; ensure travel safety and reliability for all people and goods in the region; preserve and ensure a sustainable regional transportation system; maximize productivity of

the transportation system; protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking); actively encourage and create incentives for energy efficiency, where possible; encourage land use and growth patterns that facilitate transit and non-motorized transportation; and maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.

The 2016–2040 RTP/SCS recognizes the need to provide an integrated approach to protect, maximize the productivity of, and strategically expand the region's transportation system. An important component of this strategy is "Smart Growth[1]." SCAG has been attempting to integrate land use and transportation by working with subregions and local communities to increase development densities near transit and improve the jobs/housing balance. Smart growth land use strategies encourage walking, biking, and transit use, thereby reducing vehicular demand, saving travel time, reducing pollution, and ultimately improving health.

A component of the SCAG strategy has been to focus new growth in High-Quality Transit Areas (HQTAs). HQTAs are defined as areas located within 0.5 mile of a fixed guideway transit stop or bus transit corridor. While HQTAs account for only 3 percent of the total land area in SCAG's region, HQTAs are expected to accommodate 46 percent and 55 percent of future household and employment growth, respectively, between 2012 and 2040.

On September 1, 2020, SCAG's Regional Council adopted an updated RTP/SCS known as the 2020–2045 RTP/SCS or Connect SoCal.[2] As with the 2016–2020 RTP/SCS, the purpose of the 2020–2045 RTP/SCS is to meet the mobility needs of the six-county SCAG region over the subject planning period through a roadmap identifying sensible ways to expand transportation options, improve air quality and bolster Southern California long-term economic viability.[3] The goals and policies of the 2020–2045 RTP/SCS are similar to, and consistent with, those of the 2016–2040 RTP/SCS. Because the 2020–2045 RTP/SCS was adopted by SCAG subsequent to circulation of the Notice of Preparation (NOP) for the Project, both SCAG's 2016–2040 RTP/SCS and 2020–2045 RTP/SCS are discussed further below.

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[1] *Smart growth is an approach to development that encourages a mix of land uses, diverse housing and transportation options, development within existing neighborhoods, and community engagement. See "Smart Growth Principles" in SCAG's 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy, pp. 174–175.*

[2] *SCAG, News Release: SCAG Regional Council Formally Adopts Connect SoCal, September 3, 2020.*

[3] *SCAG, News Release: SCAG Regional Council Formally Adopts Connect SoCal, September 3, 2020.*

(c) Regional Housing Needs Assessment (RHNA)

The RHNA is a key tool for SCAG and its member governments to plan for growth. The RHNA identifies the housing needs for very low income, low income, moderate income, and above moderate-income groups, and allocates these targets among the local jurisdictions that comprise SCAG. The most recent RHNA allocation, the "5th Cycle RHNA Allocation Plan," was adopted by SCAG's Regional Council on October 4, 2012. This allocation identifies housing needs from the planning period of October 2013 to October 2021.[4] Local jurisdictions are required by State law to update their General Plan Housing Elements based on the most recently adopted RHNA allocation. The RHNA is produced periodically by SCAG, as mandated by state law, to coincide with the region's schedule for preparing housing elements. It consists of two measurements of housing need: (a) existing need; and (b) future need. SCAG is in the process of developing the 6th cycle RHNA allocation plan which will cover the planning period October 2021 through October 2029.[5]

(3) Local

(a) City of Los Angeles General Plan

The City of Los Angeles General Plan was prepared pursuant to State law to guide future development and to identify the community's environmental, social, and economic goals. The General Plan sets forth goals, objectives, and programs to provide a guideline for day-to-day land use policies and to meet the existing and future needs and desires of the community, while at the same time integrating a range of State-mandated elements including Land Use, Circulation (Mobility Plan 2035), Housing, Conservation, Open Space, Safety and Noise. The City's General Plan also includes the General Plan Framework Element, discussed below, and a series of community plans, which guide land use at the community level. As discussed in more detail below, the Project Site is located in the West Los Angeles Community Plan area.

(b) Los Angeles General Plan Framework Element

The City of Los Angeles General Plan Framework Element (Framework Element), adopted in December 1996 and readopted in August 2001, sets forth general guidance and policies regarding land use issues for the City. The Framework Element focuses on providing strategies that encourage growth in a number of higher-intensity commercial and

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[4] *Given the Project's horizon year of 2023, the Project would not build any new residential units that would fall within the horizon of the current 5th Cycle Regional Housing Needs Assessment.*

[5] *SCAG, Regional Housing Needs Assessment (RHNA) & Housing, www.scag.ca.gov/programs/Pages/Housing.aspx, accessed June 20, 2021.*

mixed-use districts, centers, and boulevards, as well as industrial districts, particularly in proximity to transportation corridors and transit stations. The Framework Element is intended to be flexible and recommends the creation of new land use categories for targeted growth areas in various areas of the City that will contain regional centers, community centers, neighborhood districts, and mixed-use boulevards based on the planning principles, goals, objectives, and policies defined therein. However, the Framework Element acknowledges that precise determinations regarding future growth and development will be made through the Community Planning process. As a result, the Framework Element encourages future growth and development within identified target areas but does not require that future development and growth be limited to those areas. The Framework Element's central housing goal is an equitable distribution of housing opportunities by type and cost accessible to all residents of the City. The following Framework Element housing objective is relevant to the Project:

Objective 4.1: Plan the capacity for and develop incentives to encourage production of an adequate supply of housing units of various types within each City subregion to meet the projected housing needs by income level of the future population to the year 2010.

Project consistency with the Framework Element is addressed in Section IV.E, Land Use and Planning, of this Draft EIR.

(c) Los Angeles General Plan Housing Element (Housing Element)

The Housing Element of the General Plan is prepared pursuant to State law and provides planning guidance in meeting the housing needs identified in SCAG's RHNA. The Housing Element identifies the City's housing conditions and needs, establishes the goals, objectives, and policies that are the foundation of the City's housing and growth strategy, and provides the array of programs the City intends to implement to create sustainable, mixed-income neighborhoods. The 2013–2021 Housing Element, based on the updated 2012 RHNA, was adopted by the City Council on December 3, 2013. The following Housing Element objectives and policies are relevant to the Project:

- Objective 1.1: Produce an adequate supply of rental and ownership housing to meet current and project needs.
- Policy 1.1.3: Facilitate new construction and preservation of a range of different housing types that address the particular needs of the city's households.
- Objective 1.3: Forecast and plan for changing housing needs over time in relation to production and preservation needs.
- Policy 1.3.5: Provide sufficient land use and density to accommodate an adequate supply of housing units by type and cost within the City to meet the

projections of housing needs, according to the policies and objectives of the City's Framework Element of the General Plan.

- Objective 2.4: Promote livable neighborhoods with a mix of housing types, quality design and a scale and character that respects unique residential neighborhoods in the City.

- Objective 3.2: Promote fair housing practices and accessibility among residents, community stakeholders and those involved in the production, preservation and operation of housing.

The Housing Element carries forward the goals of the Framework Element Housing chapter to encourage the development of livable neighborhoods and preservation of the housing supply.

Chapter 1, Housing Needs Assessment, identifies the City's share of the housing needs established in the RHNA. In particular, Table 1.29, City of Los Angeles Regional Housing Needs Assessment Allocation, indicates that the City's needs assessment allocation includes 82,002 housing units.[6] The identified housing needs represent targets to be met and do not establish development caps. The allocation of 82,002 housing units represents one-fifth of the total need of 412,721 housing units identified for the six-county SCAG region. The percentage increased from the previous housing needs cycle and City proportion, which was one-sixth of the regional need.

The Housing Element also establishes quantifiable objectives regarding the number of new housing units it anticipates being constructed. The Housing Element's objective for new housing citywide by 2021 is 59,559 housing units. The Housing Element of the City's General Plan functions as a guiding document for the City's housing policy between 2013 and 2021. Although the Project's horizon year of 2023 is beyond the scope of the current Housing Element, future housing policy, including an updated Housing Element, can be anticipated to address growth beyond 2021.

(d) West Los Angeles Community Plan

The Land Use Element of the City's General Plan includes 35 Community Plans. The City's Community Plans are intended to provide an official guide for future development and propose approximate locations and dimensions for land use. The Community Plans establish standards and criteria for the development of housing, commercial uses, and industrial uses, as well as circulation and service systems. The City's Community Plans implement the City's General Plan Framework Element at the local

[6] *SCAG, 5th Cycle RHNA Final Allocation Plan, 1/1/2014–10/1/2021.*

level. Per State law, each Community Plan must be consistent with the other elements and components of the General Plan and, thus, incorporates information from these plans.

As discussed in Section II, Project Description, of this Draft EIR, the Project is located within the West Los Angeles Community Plan area. The West Los Angeles Community Plan, adopted on July 27, 1999, includes the following objectives and policies that are relevant to population and housing:

- Policy 1-2.2: Locate senior citizen housing within reasonable walking distance of health and community facilities, services and public transportation.
- Objective 1-4: To promote adequate and affordable housing and increase its accessibility to more segments of the population, especially students and senior citizens.
- Policy 1-4.3: Encourage multiple residential development in specified commercial zones.

The Department of City Planning is currently updating the West Los Angeles Community Plan in conjunction with the Palms-Mar Vista-Del Rey, Venice, and Westchester–Playa Del Rey Community Plans, whose areas together make up the Westside of Los Angeles.[7]

(e) L.A.'s Green New Deal (Sustainable City pLAn 2019)

In April 2019, Mayor Eric Garcetti released L.A.'s Green New Deal (Sustainable City pLAn 2019), a program of actions designed to create sustainability-based performance targets through 2050 in order to advance economic, environmental, and equity objectives. L.A.s Green New Deal is the first four-year update to the City's first Sustainable City pLAn that was released in 2015. It augments, expands, and elaborates in even more detail the City's vision for a sustainable future and it tackles the climate emergency with accelerated targets and new aggressive goals.

The Housing & Development chapter of the Green New Deal includes the following targets for the number of new housing units to be provided within the City:

- Ensure 57 percent of new housing units are built within 1,500 feet of transit by 2025; and 75 percent by 2035.

[7] *City of Los Angeles, Planning the Westside, https://planning.lacity.org/plans-policies/community-plan-update/planning-westside, accessed June 20, 2021.*

- Increase cumulative new housing unit construction to 150,000 by 2025; and 275,000 units by 2035.
- Create or preserve 50,000 income-restricted affordable housing units by 2035 and increase stability for renters.

(f) Rent Stabilization Ordinance and Ellis Act

The City's Rent Stabilization Ordinance (RSO) was adopted in 1979 to protect tenants from excessive rents, while at the same time allowing landlords a reasonable return on their investments.[8] The existing units on the Project Site are subject to the RSO.

The RSO implements the Ellis Act for the City, which was adopted in 1986 and sets forth specific requirements on how RSO units are to be withdrawn from the rental market, including requirements related to tenant notice and relocation assistance.[9]

b. Existing Conditions

(1) Population

(a) Regional Conditions

As shown in Table IV.G-1 on page IV.G-9, SCAG's 2016–2040 RTP/SCS growth forecast shows the population estimate for the SCAG Region in 2019 is approximately 19,260,875 people.[10] By 2023 (the Project buildout year), the population estimates for the SCAG Region in the 2016–2040 RTP/SCS were forecast to increase to approximately 19,813,200 people,[11] an increase of 2.87 percent or approximately 552,325 people.

As shown in Table IV.G-2 on page IV.G-10, based on SCAG's 2020–2045 RTP/SCS, growth forecast shows the population estimate for the SCAG Region in 2019 is

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[8] *HCID RSO Overview: https://hcidla2.lacity.org/residents/rso-overview, accessed June 20, 2021.*

[9] *Refer to Government Code Sections 7060-7060.7 for additional details regarding the Ellis Act.*

[10] *The 2019 extrapolated value is calculated using SCAG's 2012 and 2020 values to find the average increase between years and then applying that annual increase to 2012: ((19,395,000 – 18,322,000) ÷ 8) + 19,126,750 = 19,260,875.*

[11] *The 2023 extrapolated value is calculated using SCAG's 2020 and 2035 values to find the average increase between years and then applying that annual increase to 2020: ((21,486,000 – 19,395,000) ÷ 15) + 19,673,800 = 19,813,200.*

Table IV.G-1
SCAG 2016–2040 RTP/SCS Forecast

Year	Population	Households	Employment
SCAG			
2019[a]	19,260,875	6,348,750	8,373,625
2023[b]	19,813,200	6,566,400	8,720,000
2019 to 2023 Difference	552,325	217,650	346,375
Percent Change	**2.87%**	**3.43%**	**4.14%**
City of Los Angeles[c]			
2019	4,036,475	1,416,700	1,814,575
2023	4,145,604	1,468,814	1,882,104
2019 to 2023 Difference	109,129	52,114	67,529
Percent Change	**2.70%**	**3.68%**	**3.72%**

[a] *Population, households, and employment forecast for SCAG region in 2019 calculated based on linear interpolation of 2012 and 2020 values.*

[b] *Population, households, and employment forecast for SCAG region in 2023 calculated based on linear interpolation of 2020 and 2035 values.*

[c] *Population, households, and employment forecast for City of Los Angeles in 2019 and 2023 based on linear interpolations of 2012 and 2040 values.*

Source: SCAG 2016–2040 RTP/SCS; Eyestone Environmental, 2021.

approximately 19,346,500 people.[12] By 2023, the population estimates for the SCAG Region in the 2020–2045 RTP/SCS have been forecast to increase to approximately 19,908,900 people,[13] an increase of 2.91 percent or approximately 562,400 people.

(b) City of Los Angeles

As provided in Table IV.G-1, SCAG's 2016–2040 RTP/SCS growth forecast projects a population for the City of Los Angeles of approximately 4,036,475 in 2019.[14] By 2023, the population estimates for the City of Los Angeles in the 2016–2040 RTP/SCS

[12] *The 2019 extrapolated value is calculated using SCAG's 2016 and 2020 values to find the average increase between years and then applying that annual increase to 2016: ((19,518,000 – 18,832,000) ÷ 4) + 19,175,000 = 19,346,500.*

[13] *The 2023 extrapolated value is calculated using SCAG's 2020 and 2035 values to find the average increase between years and then applying that annual increase to 2020: ((20,821,000 – 19,518,000) ÷ 10) + 19,778,600 = 19,908,900.*

[14] *The 2019 extrapolated value is calculated using SCAG's 2012 and 2040 values to find the average increase between years and then applying that annual increase to 2012: [((4,609,400 – 3,845,500) ÷ 28) * 7] + 3,845,500 = 4,036,475.*

Table IV.G-2
SCAG 2020–2045 RTP/SCS Forecast

Year	Population	Households	Employment
SCAG			
2019[a]	19,346,500	6,252,750	8,618,500
2023[b]	19,908,900	6,504,000	8,877,700
2019 to 2023 Difference	562,400	251,250	259,200
Percent Change	**2.91%**	**4.02%**	**3.01%**
City of Los Angeles[c]			
2019	4,020,438	1,411,069	1,878,052
2023	4,135,955	1,469,828	1,917,721
2019 to 2023 Difference	115,517	58,759	39,669
Percent Change	**2.87%**	**4.16%**	**2.11%**

[a] *Population, households, and employment forecast for SCAG region in 2019 calculated based on linear interpolation of 2016 and 2020 values.*

[b] *Population, households forecast for SCAG region in 2023 calculated based on linear interpolation of 2020 and 2030 values.*

[c] *Population, households, and employment forecast for City of Los Angeles in 2019 and 2023 based on linear interpolations of 2016 and 2045 values.*

Source: SCAG 2020–2045 RTP/SCS; Eyestone Environmental, 2021.

were forecast to increase to approximately 4,145,604 people,[15] an increase of 2.70 percent or approximately 109,129 people.

As provided in Table IV.G-2, based on SCAG's 2020–2045 RTP/SCS, growth forecast shows the population estimate for the City of Los Angeles in 2019 is approximately 4,020,438 people.[16] By 2023, the population estimates for the City of Los Angeles in the 2020–2045 RTP/SCS have been forecast to increase to approximately 4,135,955 people,[17] an increase of 2.87 percent or approximately 115,517 people.

[15] *The 2023 extrapolated value is calculated using SCAG's 2012 and 2040 values for the City of Los Angeles to find the average increase between years and then applying that annual increase to 2012: [((4,609,400 – 3,845,500) ÷ 28) * 11] + 3,845,500 = 4,145,604.*

[16] *The 2019 extrapolated value is calculated using SCAG's 2016 and 2045 for the City of Los Angeles values to find the average increase between years and then applying that annual increase to 2016: [((4,771,300 – 3,933,800) ÷ 29) * 3] + 3,933,800 = 4,020,438.*

[17] *The 2023 extrapolated value is calculated using SCAG's 2016 and 2045 values for the City of Los Angeles to find the average increase between years and then applying that annual increase to 2016: [((4,771,300 – 3,933,800) ÷ 29) * 7] + 3,933,800 = 4,135,955.*

(c) Project Site

As discussed in Section II, Project Description, of this Draft EIR, the Project Site is currently developed with three multi-family residential developments totaling 112 units, including 95 studio units, 15 one-bedroom units, and two two-bedroom units. Based on the generation rates provided by the City of Los Angeles VMT Calculator Documentation, it is estimated that the existing 112 multi-family residential units could house approximately 252 people.[18] It is noted that this estimate is conservative given the types and sizes of units currently on the Project Site (mostly studio and one-bedroom units approximately 275 to 375 square feet in size).

(2) Housing

(a) Regional Conditions

As summarized in Table IV.G-1 on page IV.G-9, SCAG's 2016–2040 RTP/SCS regional growth forecast projects approximately 6,348,750 households in the SCAG Region in 2019.[19] By 2023, the number of households is expected to increase to approximately 6,566,400 households,[20] an increase of 3.43 percent or approximately 217,650 households.

As summarized in Table IV.G-2 on page IV.G-10, based on SCAG's 2020–2045 RTP/SCS, regional growth forecast projects approximately 6,252,750 households in the SCAG Region in 2019.[21] By 2023, the number of households is expected to increase to approximately 6,504,000 households,[22] an increase of 4.02 percent or approximately 251,250 households.

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[18] *Based on the City of Los Angeles VMT Calculator Documentation Guide, Table 1, May 2020, the generation rate 2.25 persons per unit for "Multi-Family Residential" land use is applied to the 112 existing residential units.*

[19] *The 2019 extrapolated value is calculated using SCAG's 2012 and 2020 values for the SCAG region to find the average increase between years and then applying that annual increase to 2012: ((6,415,000 – 5,885,000) ÷ 8) + 6,282,500 = 6,348,750.*

[20] *The 2023 extrapolated value is calculated using SCAG's 2020 and 2035 values for the SCAG region to find the average increase between years and then applying that annual increase to 2020: ((7,172,000 – 6,415,000) ÷ 15) + 6,515,933 = 6,566,400.*

[21] *The 2019 extrapolated value is calculated using SCAG's 2016 and 2020 values for the SCAG region to find the average increase between years and then applying that annual increase to 2016: ((6,333,000 – 6,012,000) ÷ 4) + 6,172,500 = 6,252,750.*

[22] *The 2023 extrapolated value is calculated using SCAG's 2020 and 2030 values for the SCAG region to find the average increase between years and then applying that annual increase to 2020: ((6,903,000 – 6,333,000) ÷ 10) + 6,447,000 = 6,504,000.*

(b) City of Los Angeles

Based on SCAG's 2016–2040 RTP/SCS growth forecast, as provided in Table IV.G-1 on page IV.G-9, approximately 1,416,700 households are projected in the City of Los Angeles in 2019.[23] By 2023, the number of households is expected to increase to increase to approximately 1,468,814 households,[24] an increase of 3.68 percent or approximately 52,114 households.

As provided in Table IV.G-2 on page IV.G-10, based on SCAG's 2020–2045 RTP/SCS, regional growth forecast projects approximately 1,411,069 households in the City of Los Angeles in 2019.[25] By 2023, the number of households is expected to increase to approximately 1,469,828 households,[26] an increase of 4.16 percent or approximately 58,759 households.

(c) Project Site

As previously noted, the Project Site is currently developed with three multi-family residential developments comprising a total of 112 housing units, including 95 studio units, 15 one-bedroom units, and two two-bedroom units. The existing on-site units are subject to the RSO.

(3) Employment

(a) Los Angeles Regional and County Conditions

The Southern California region is one of the nation's largest and most dynamic regional economies, and it accounts for about half the jobs and population in the state. Its $1.042 trillion gross regional product ranks as the 16th largest in the world—between

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[23] *The 2019 extrapolated value is calculated using SCAG's 2012 and 2040 values for the City of Los Angeles to find the average increase between years and then applying that annual increase to 2012: [((1,690,300 – 1,325,500) ÷ 28) * 7] + 1,325,500 = 1,416,700.*

[24] *The 2023 extrapolated value is calculated using SCAG's 2012 and 2040 values for the City of Los Angeles to find the average increase between years and then applying that annual increase to 2012: [((1,690,300 – 1,325,500) ÷ 28) * 11] + 1,325,500 = 1,468,814.*

[25] *The 2019 extrapolated value is calculated using SCAG's 2016 and 2045 values for the City of Los Angeles to find the average increase between years and then applying that annual increase to 2016: [((1,793,000 – 1,367,000) ÷ 29) * 3] + 1,367,000 = 1,411,069.*

[26] *The 2023 extrapolated value is calculated using SCAG's 2016 and 2045 values for the City of Los Angeles to find the average increase between years and then applying that annual increase to 2016: [((1,793,000 – 1,367,000) ÷ 29) * 7] + 1,367,000 = 1,469,828.*

Mexico and Indonesia.[27] The four cornerstones that support the region's economy, which is now much more diversified than in the past, are: (1) international trade, primarily through Los Angeles International Airport and the Ports of Los Angeles, Long Beach and Port Hueneme; (2) the nation's largest entertainment and tourism sector; (3) the nation's largest diversified manufacturing sector; and (4) growing professional services, biotechnology, and design markets.[28]

(b) Regional Conditions

As summarized in Table IV.G-1 on page IV.G-9, SCAG's 2016–2040 RTP/SCS regional growth forecast projects approximately 8,373,625 jobs in the SCAG Region in 2019.[29] By 2023, the number of jobs is expected to increase to approximately 8,720,000 jobs,[30] an increase of 4.14 percent or approximately 346,375 jobs.

As shown in Table IV.G-2 on page IV.G-10, based on SCAG's 2020–2045 RTP/SCS, regional growth forecast projects approximately 8,618,500 jobs in the SCAG Region in 2019.[31] By 2023, the number of jobs is expected to increase to approximately 8,877,700 jobs,[32] an increase of 3.01 percent or approximately 259,200 jobs.

(c) City of Los Angeles

Based on SCAG's 2016–2040 RTP/SCS growth forecast, as provided in Table IV.G-1, approximately 1,814,575 jobs are projected in the City of Los Angeles

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[27] *Los Angeles County Economic Development Corporation (LAEDC), 2016–17 Economic Forecast and Industry Outlook, Table 4, p. 25, February 2016.*

[28] *Los Angeles County Economic Development Corporation (LAEDC), 2016–17 Economic Forecast and Industry Outlook, February 2016.*

[29] *The 2019 extrapolated value is calculated using SCAG's 2012 and 2020 values for the SCAG region to find the average increase between years and then applying that annual increase to 2012: ((8,507,000 – 7,440,000) ÷ 8) + 8,240,250 = 8,373,625.*

[30] *The 2023 extrapolated value is calculated using SCAG's 2020 and 2035 values for the SCAG region to find the average increase between years and then applying that annual increase to 2020: ((9,572,000 – 8,507,000) ÷ 15) + 8,649,000 = 8,720,000.*

[31] *The 2019 extrapolated value is calculated using SCAG's 2016 and 2020 values for the SCAG region to find the average increase between years and then applying that annual increase to 2016: ((8,695,000 – 8,389,000) ÷ 4) + 8,542,000 = 8,618,500.*

[32] *The 2023 extrapolated value is calculated using SCAG's 2020 and 2030 values for the SCAG region to find the average increase between years and then applying that annual increase to 2020: ((9,304,000 – 8,695,000) ÷ 10) + 8,816,800 = 8,877,700.*

in 2019.[33] By 2023, the number of jobs is expected to increase to approximately 1,882,104 jobs,[34] an increase of 3.72 percent or approximately 67,529 jobs.

As shown in Table IV.G-2 on page IV.G-10, based on SCAG's 2020–2045 RTP/SCS, regional growth forecast projects approximately 1,878,052 jobs in the City of Los Angeles in 2019.[35] By 2023, the number of jobs is expected to increase to approximately 1,917,721 jobs,[36] an increase of 2.11 percent or approximately 39,669 jobs.

(d) Project Site

As discussed above and as previously noted, the Project Site is currently developed with three multi-family residential developments comprising a total of 112 housing units, including 95 studio units, 15 1-bedroom units, and two 2-bedroom units. As such, existing uses on-site do not accommodate any existing employees.

3. Project Impacts

a. Thresholds of Significance

In accordance with the State CEQA Guidelines Appendix G, the Project would have a significant impact related to population or housing if it would:

Threshold (a): Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example through extension of roads or other infrastructure)?

Threshold (b): Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

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[33] *The 2019 extrapolated value is calculated using SCAG's 2012 and 2040 values for the City of Los Angeles to find the average increase between years and then applying that annual increase to 2012: [((2,169,100 – 1,696,400) ÷ 28) * 7] + 1,696,400 = 1,814,575.*

[34] *The 2023 extrapolated value is calculated using SCAG's 2012 and 2040 values for the City of Los Angeles to find the average increase between years and then applying that annual increase to 2012: [((2,169,100 – 1,696,400) ÷ 28) * 11] + 1,696,400 = 1,882,104.*

[35] *The 2019 extrapolated value is calculated using SCAG's 2016 and 2045 values for the City of Los Angeles to find the average increase between years and then applying that annual increase to 2016: [((2,135,900 – 1,848,300) ÷ 29) * 3] + 1,848,300 = 1,878,052.*

[36] *The 2023 extrapolated value is calculated using SCAG's 2016 and 2045 values for the City of Los Angeles to find the average increase between years and then applying that annual increase to 2016: [((2,135,900 – 1,848,300) ÷ 29) * 7] + 1,848,300 = 1,917,721.*

For this analysis, the Appendix G Thresholds listed above are relied upon. The analysis utilizes factors and considerations identified in the City's 2006 L.A. CEQA Thresholds Guide (Thresholds Guide), as appropriate, to assist in answering the Appendix G Threshold questions.

The LA CEQA Thresholds Guide identifies the following criteria that can be considered to evaluate population and housing growth on a case-by-case basis:

- The total number of residential units to be demolished, converted to market rate, or removed through other means as a result of the Proposed Project, in terms of net loss of market-rate and affordable units;
- The current and anticipated housing demand and supply of market rate and affordable housing units in the project area;
- The land use and demographics characteristics of the project area and the appropriateness of housing in the area; and
- Whether the project is consistent with adopted City and regional housing policies such as the Framework and Housing Elements, United States Department of Housing and Urban Development Consolidated Plan and Comprehensive Housing Affordability Strategy policies, redevelopment plan, RSO, and the Regional Comprehensive Plan and Guide (RCP&G).

As provided in the impact analysis below, the Project's potential impacts related to inducing substantial unplanned population growth were fully evaluated in the Initial Study. As such, the factors and considerations from Section J.1 of the City's L.A. CEQA Thresholds Guide relative to unplanned population growth are not applicable.

b. Methodology

As evaluated below, the Project's potential impacts related to population and housing that are considered in this section of the Draft EIR relate to the displacement of substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere. As such, this analysis considers the number of housing units displaced by the Project and any features included as part of the Project to assist existing residents with relocation.

c. Project Design Features

No specific project design features are proposed with regard to population and housing.

d. Analysis of Project Impacts

Threshold (a): Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example through extension of roads or other infrastructure)?

As discussed in Section VI, Other CEQA Considerations, of this Draft EIR, and evaluated in the Initial Study prepared for the Project, included in Appendix A of this Draft EIR, the Project would remove three existing multi-family residential developments with a total of 112 residential units and would construct 192 senior housing residential units. The Project would result in a net increase of 80 residential units compared to existing conditions. The proposed type of units is not typically associated with a substantial increase in population growth, but rather serving the need for senior housing. Therefore, as determined in the Initial Study, the Project would not induce substantial population growth in the area. With regard to infrastructure, all circulation improvements planned as part of the Project are intended to improve circulation flows and safety throughout the Project Site and vicinity. Any utility and other infrastructure improvements that may be required by the Project would be necessary to connect the proposed uses to the existing main infrastructure system. As determined in the Initial Study, the Project also would not indirectly induce substantial unplanned population growth in the area. **Therefore, impacts with respect to Threshold (a) would be less than significant. No further analysis is required.**

Threshold (b): Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

(1) Impact Analysis

The Project Site is currently developed with three multi-family residential developments with a total of 112 units that would be removed as part of the Project. Based on the generation rates provided by the City of Los Angeles VMT Calculator Documentation and 112 units, the existing multi-family residential buildings could house approximately 252 people.[37] As previously noted, this estimate is conservative given the types and sizes of units currently on the Project Site (mostly studio and one-bedroom units approximately 275 to 375 square feet in size). The actual number of existing persons on the Project Site would likely be less than that estimated by the use of the City's general

[37] *Based on the City of Los Angeles VMT Calculator Documentation Guide, Table 1, May 2020, the generation rate 2.25 persons per unit for "Multi-Family Residential" land use is applied to the 112 existing residential units.*

household rate. Notwithstanding, the Project would displace 112 existing multi-family residential units and the associated residents of those units.

The Project would construct 192 senior housing residential units in an eldercare facility, including 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms. The Project would result in a net increase of 80 residential units (192 proposed units – 112 existing units to be removed). As an eldercare facility, the Project would provide a specific type of residential use as compared to the existing multi-family residential buildings at the Project Site. Eldercare facilities serve a senior population with certain regulated care requirements while the existing residential units are not age-restricted nor providing senior community care services. Thus, residents will be displaced due to the demolition of the existing multi-family residential buildings. As discussed above, the existing on-site units are subject to the RSO. The Project would be required to comply with the applicable provisions of the RSO and the Ellis Act. Furthermore, the types and sizes of units currently on the Project Site are mostly studio and one-bedroom units (approximately 275 to 375 square feet in size). As such, the household size of the existing units is likely closer to one person per unit with a resulting on-site residential population of approximately 112 persons. Therefore, although the Project would displace existing residents, the Project would increase the overall availability of residential units and the overall residential population on-site upon Project completion. Therefore, the displacement would not be considered substantial requiring the construction of replacement housing elsewhere. Additionally, it is anticipated that senior residents will vacate their current residential housing elsewhere to move to the Project Site upon completion of the Project, thereby providing for the availability of other housing elsewhere. **As such, Project-level impacts with regard to displacing a substantial number of existing people or housing would be less than significant.**

(2) Mitigation Measures

Project-level impacts with regard to displacing a substantial number of existing people or housing would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation Measures

Project-level impacts with regard to displacing a substantial number of existing people or housing were determined to be less than significant without mitigation. Therefore, no mitigation measures are required or included, and the impact level remains less than significant.

e. Cumulative Impacts

(1) Impact Analysis

As identified in Section III, Environmental Setting, of this Draft EIR, six related projects in the surrounding area are assumed to be constructed and/or operational during the same time period as the Project. It is noted that some of the related projects may not be built out by 2023, may never be built, or may be approved and built at reduced densities.

With regard to the displacement of existing persons and housing, Related Project Nos. 1, 2, 4, 5, and 6 would not involve the displacement of existing persons or housing.[38,39,40,41,42] Therefore, these related projects would not combine with the Project to result in a significant impact related to the displacement of persons or housing. In addition, Related Project Nos. 1, 4, and 5 would involve the construction of additional housing, which would serve to meet the demand for additional housing in the area and in the City as a whole.

Related Project No. 3, located at 10306 W. Santa Monica Boulevard, would involve the demolition and removal of five existing multi-family residential apartment buildings with a total of 26 residential units.[43] However, as discussed in the Categorical Exemption prepared for Related Project No. 3, this related project would develop 91 to 116 residential units. Although Related Project No. 3 would displace existing residents, the proposed related project would increase the overall availability of housing units on-site a net total of 65 to 90 residential units upon buildout. In addition, as discussed above, other related projects in the area have proposed the development of additional housing, which would serve to meet the demand for additional housing in the area. Therefore, the displacement of persons and housing associated with Related Project No. 3 and the Project would not result in a significant cumulative impact.

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[38] *City of Los Angeles. Department of City Planning. New Century Plan Draft EIR, https://planning.lacity.org/eir/CenturyPlan/DEIR/issues/home.htm, June 20, 2021.*

[39] *City of Los Angeles. Department of City Planning. Century City Center Draft EIR, http://planning.lacity.org/eir/CenturyCityCenter/DEIR/index.html, accessed June 20, 2021.*

[40] *City of Los Angeles. Department of City Planning. Century Plaza Mixed-Use Development Final EIR, https://planning.lacity.org/eir/CenturyPlazaMixedDevelopment/feir/index.html, accessed June 20, 2021.*

[41] *City of Los Angeles Department of City Planning. 10400 Santa Monica Boulevard Categorical Exemption.*

[42] *City of Los Angeles. Department of City Planning. Fox Studios Master Plan Initial Study.*

[43] *City of Los Angeles, Department of City Planning, 10306–10330 Santa Monica Boulevard Categorical Exemption.*

(2) Mitigation Measures

Cumulative impacts with regard to population and housing would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance after Mitigation

Cumulative impacts with regard to population and housing were determined to be less than significant without mitigation. Therefore, no mitigation measures are required or included, and the impact level remains less than significant.

IV. Environmental Impact Analysis

H.1 Public Services—Fire Protection

1. Introduction

This section of the Draft EIR provides an analysis of the Project's potential impacts on fire protection services. The analysis includes a description of the existing fire protection services in the vicinity of the Project Site and considers factors used by the Los Angeles Fire Department (LAFD) to determine the adequacy of fire protection for a given area, including fire flow requirements, response distance from existing fire stations, and LAFD's judgment for needs in the area. Emergency access to the Project Site and surrounding uses is also considered. This analysis is based, in part, on information available on LAFD's website, written correspondence from the LAFD Bureau of Fire Prevention and Public Safety (July 12, 2019) included in Appendix G, and the *Water, Sewer, and Energy Infrastructure Assessment Report*, prepared for the Project by Fuscoe Engineering, Inc., dated February 2020 (Utility Report), which is included in Appendix J of this Draft EIR.

2. Environmental Setting

a. Regulatory Framework

(1) Federal

The federal and California Occupational Safety and Health Administrations enforce the provisions of the federal and state Occupational Safety and Health Acts (OSHA and CalOSHA), respectively, which collectively require safety and health regulations for construction under Part 1926 of Title 29 Code of Federal Regulations (CFR). The fire-related requirements of OSHA are specifically contained in Subpart F, Fire Protection and Prevention, of Part 1926. Examples of general requirements related to fire protection and prevention include maintaining fire suppression equipment specific to construction on-site; providing a temporary or permanent water supply of sufficient volume, duration, and pressure; properly operating the on-site fire-fighting equipment; and keeping storage sites free from accumulation of unnecessary combustible materials.

(2) State

(a) California Building Code and California Fire Code

The California Building Code (California Code of Regulations [CCR], Title 24, Part 2) is a compilation of building standards, including fire safety standards for new buildings, which are provided in the California Fire Code (CCR, Title 24, Part 9). California Building Code standards are based on building standards that have been adopted by state agencies without change from a national model code; building standards based on a national model code that have been changed to address particular California conditions; and building standards authorized by the California legislature but not covered by the national model code. The 2019 edition of the California Building Code became effective on January 1, 2020.[1] The building standards in the California Building Code apply to all locations in California, except where more stringent standards have been adopted by state agencies and local governing bodies. The 2019 California Fire Code also went into effect on January 1, 2020.[2] Typical fire safety requirements of the California Fire Code include: the installation of fire sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures within wildfire hazard areas. Specific California Fire Code fire safety regulations have been incorporated by reference in the Los Angeles Municipal Code (LAMC) with local amendments, as discussed below.

(b) California Vehicle Code

Section 21806 of the California Vehicle Code (CVC) pertains to emergency vehicles responding to Code 3 incidents/calls.[3] This section of the CVC states the following:

> *Upon the immediate approach of an authorized emergency vehicle which is sounding a siren and which has at least one lighted lamp exhibiting red light that is visible, under normal atmospheric conditions, from a distance of 1,000 feet to the front of the vehicle, the surrounding traffic shall, except as otherwise directed by a traffic officer, do the following: (a)(1) Except as required under paragraph (2), the driver of every other vehicle shall yield the right-of-way and shall immediately drive to the right-hand edge or curb of the highway, clear of any intersection, and thereupon shall stop and remain*

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[1] *California Building Code (CCR, Title 24, Part 2).*

[2] *California Fire Code, (CCR, Title 24, Part 9).*

[3] *A Code 3 response to any emergency may be initiated when one or more of the following elements are present: a serious public hazard, an immediate pursuit, preservation of life, a serious crime in progress, and prevention of a serious crime. A Code 3 response involves the use of sirens and flashing red lights.*

stopped until the authorized emergency vehicle has passed. (2) A person driving a vehicle in an exclusive or preferential use lane shall exit that lane immediately upon determining that the exit can be accomplished with reasonable safety…. (c) All pedestrians upon the highway shall proceed to the nearest curb or place of safety and remain there until the authorized emergency vehicle has passed.

(c) California Constitution Article XIII, Section 35

Section 35 of Article XIII of the California Constitution at subdivision (a)(2) provides: "The protection of public safety is the first responsibility of local government and local officials have an obligation to give priority to the provision of adequate public safety services." Section 35 of Article XIII of the California Constitution was adopted by the voters in 1993 under Proposition 172. Proposition 172 directed the proceeds of a 0.50-percent sales tax to be expended exclusively on local public safety services. California Government Code Sections 30051-30056 provide rules to implement Proposition 172. Public safety services include fire protection. Section 30056 mandates that cities are not allowed to spend less of their own financial resources on their combined public safety services in any given year compared to the 1992-93 fiscal year. Therefore, an agency is required to use Proposition 172 to supplement its local funds used on fire protection services, as well as other public safety services.

In *City of Hayward v. Board of Trustees of California State University* (2015) 242 Cal. App. 4th 833, the court found that Section 35 of Article XIII of the California Constitution requires local agencies to provide public safety services, including fire protection and emergency medical services, and that it is reasonable to conclude that the city will comply with that provision to ensure that public safety services are provided.[4]

(3) City of Los Angeles

(a) City of Los Angeles Charter

Section 520 of the City's Charter states that the LAFD's duty is to control and extinguish injurious or dangerous fires and to remove that which is liable to cause those fires. It also requires the LAFD to enforce all ordinances and laws relating to the prevention or spread of fires, fire control, and fire hazards within the City, as well as to conduct fire investigations and protect lives and property in case of disaster or public calamity.

[4] *City of Hayward v. Board Trustees of California State University (2015) 242 Cal. App. 4th 833, 847.*

(b) City of Los Angeles General Plan Framework Element

The City of Los Angeles General Plan Framework Element (Framework Element), adopted in December 1996 and readopted in August 2001, sets forth general guidance regarding land use issues for the entire City and defines citywide policies regarding land use, including infrastructure and public services. Goal 9J of the Infrastructure and Public Services Chapter of the Framework Element specifies that every neighborhood have the necessary level of fire protection service, emergency medical services, and infrastructure.[5] Objective 9.16 requires that the demand for existing and projected fire facilities and service be monitored and forecasted. Objective 9.17 requires that all areas of the City have the highest level of fire protection and emergency medical services, at the lowest possible cost, to meet existing and future demand. Objective 9.18 requires that the development of new fire facilities be phased with growth. Further, Objective 9.19 requires the maintenance of the LAFD's ability to assure public safety in emergency situations. The City's General Plan Safety Element, discussed below, recognizes that most jurisdictions rely on emergency personnel (police, fire, gas, and water) to respond to and handle emergencies. Under the Framework Element, the City standard for response distance from a fire station is 1.5 miles.[6] This is consistent with the specifications for response distances within the LAMC, discussed below.

(c) City of Los Angeles General Plan Safety Element

The City's General Plan Safety Element, adopted on November 26, 1996, includes policies related to the City's response to hazards and natural disasters, including fires. In particular, the General Plan Safety Element sets forth requirements, procedures, and standards to facilitate effective fire suppression and emergency response capabilities. For example, Policy 2.1.6 requires the LAFD to revise regulations and procedures to include the establishment of minimum standards for the location and expansion of fire facilities based on fire flow, intensity and type of land use, life hazard, occupancy, and degree of hazard so as to provide adequate fire and emergency medical service response. In addition, the City's General Plan Safety Element designates disaster routes. The nearest designated disaster route to the Project Site is Olympic Boulevard, which is approximately 70 feet to the north of the Project Site.[7]

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[5] *City of Los Angeles General Plan Framework Element, Chapter 9: Infrastructure and Public Services.*

[6] *City of Los Angeles General Plan Framework Element, p. 9-5.*

[7] *City of Los Angeles General Plan Safety Element, Exhibit H, adopted by the City Council, November 26, 1996.*

(d) West Los Angeles Community Plan

The Project Site is located within the planning boundary of the West Los Angeles Community Plan. The Community Plan, adopted on July 27, 1999, and last amended on September 7, 2016, includes the following objective and policies related to fire protection:

- Objective 9-1: Ensure that fire facilities and protective services are sufficient for the existing and future population and land use.
  - Policy 9-1.1: Coordinate with the Fire Department the review of significant development projects and General Plan amendments affecting land use to determine the impact on service demands.
  - Policy 9-1.2: Assist the Fire Department in locating fire service facilities at appropriate locations throughout the Community.

(e) Los Angeles Municipal Code

The LAMC includes provisions for new construction projects within the City. The LAMC contains, by reference, the California Building Code building construction standards, including the California Fire Code, and reflects the policies of the City's General Plan Safety Element. LAMC Chapter V, Article 7, Fire Prevention and Protection (also known as the Fire Code) sets forth regulatory requirements pertaining to the prevention of fires; the investigation of fires and life safety hazards; the elimination of fire and life safety hazards in any building or structure (including buildings under construction); the maintenance of fire protection equipment and systems; and the storage, use, and handling of hazardous materials.[8]

Specifically, LAMC Section 57.106.5.2 provides that the Fire Chief shall have the authority to require drawings, plans, or sketches as may be necessary to identify: (1) occupancy access points; (2) devices and systems; (3) utility controls; (4) stairwells; and (5) hazardous materials/waste. In addition, LAMC Section 57.107.7 requires that the installation, alteration, and major repair of the following be performed pursuant to a permit issued by the Department of Building and Safety: Fire Department communication systems, building communication systems, automatic elevators, heliports, emergency power systems, fire escapes, private fire hydrants, fire assemblies, fire protective signaling systems, pilot lights and warning lights for heat-producing equipment, refrigerant discharge systems, smoke detectors, emergency smoke control systems, automatic sprinkler systems, standpipe systems, and gas detection systems, as applicable. Furthermore, LAMC Section 57.118

[8] *LAMC Article 7, Chapter V, Former Article 7 Repealed and Replaced by Ordinance Number 186,616, effective May 24, 2020, to incorporate by reference portions of the 2019 California Code and the 2018 International Fire Code.*

establishes LAFD's fire/life safety plan review and LAFD's fire/life safety inspection for new construction projects. The Project would comply with these requirements of the Fire Code, as applicable.

The LAMC also addresses access, fire water flow requirements, and hydrants. Specifically, LAMC Section 57.503.1.4 requires the provision of an approved, posted fire lane whenever any portion of an exterior wall is more than 150 feet from the edge of a roadway, while LAMC Section 57.507.3.1 establishes fire water flow standards. Fire water flow requirements, as determined by the LAFD, vary by project site as they are dependent on land use (e.g., higher intensity land uses require higher flow from a greater number of hydrants), life hazard, occupancy, and fire hazard level. As set forth in LAMC Section 57.507.3.1, fire water flow requirements vary from 2,000 gallons per minute (gpm) in low density residential areas to 12,000 gpm in high-density commercial or industrial areas with a minimum residual water pressure of 20 pounds per square inch (psi) remaining in the water system. As determined by the LAFD, the required fire water flow for the Project has been set at 6,000 to 9,000 gpm from four to six hydrants flowing simultaneously with a residual pressure of 20 psi.[9]

LAMC Section 57.507.3.2 addresses land use-based requirements for fire hydrant spacing and type. As stated above, based on LAFD's fire flow determination, the Project would be considered under the Industrial and Commercial category, and therefore would require one hydrant per 80,000 square feet of land with a 300-foot distance between hydrants, and 2.5-inch by 4-inch double fire hydrants or 4-inch by 4-inch double fire hydrants. Regardless of land use, every first story of a residential, commercial, and industrial building must be within 300 feet of an approved hydrant. If required by the LAFD, the Project would install additional fire hydrant(s) to meet the hydrant spacing requirements as set forth in LAMC Section 57.507.3.2. The number and location of hydrants would be determined as part of LAFD's fire/life safety plan review for the Project.

LAMC Section 57.512.1 provides that response distances, which are based on land use and fire flow requirements, shall comply with LAMC Table 57.507.3.3. Based on Table 57.507.3.3 provided in LAMC Section 57.507.3.3 and as set forth in the correspondence from LAFD, the maximum response distance for the Project from fire stations with an engine company is one mile and the maximum response distance from fire stations with a truck company is 1.5 miles. Where a response distance is greater than that which is allowable, all structures must be constructed with automatic fire sprinkler systems.

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[9] *Written correspondence from Ralph M. Terrazas, Fire Chief, and Kristen Crowley, Fire Marshal, Bureau of Fire Prevention and Public Safety, Los Angeles Fire Department, July 12, 2019.*

(f) City of Los Angeles Propositions

Proposition F, the City Fire Facilities Bond, approved by voters in November 2000, allocated $378.6 million to build 19 new or replacement neighborhood fire/paramedic stations.[10] The Proposition F Fire Facilities Bond Team consists of the LAFD, the City Bureau of Engineering (BOE), and a contracting firm Bovis Lend Lease. This team oversees allocation of the funds and has identified numerous projects to upgrade fire facilities, including construction of new training centers, replacing and constructing new fire stations, and building a new Air Operations Helicopter Facility and General Services Helicopter Fleet Maintenance Building.[11] As reported in November 2019, BOE completed the original Proposition F program projects under budget and funded two additional fire stations with the remaining savings and interest.[12]

Proposition Q, the Citywide Public Safety Bond Measure, was approved by voters in March 2002. This proposition involves the spending of $600 million to renovate, improve, expand and construct public safety (police, fire, paramedic) facilities.[13] Proposition Q involves 13 overall projects consisting of the construction and/or replacement of five police stations, replacement of one police station and jail, construction of two bomb squad facilities, replacement of one jail, construction of one new Emergency Operations Center/Police Operations Center/Fire Dispatch Center facility, construction of the Valley Traffic Division and Bureau Headquarters, renovation of existing fire facilities, and renovation of police facilities.[14] As part of Proposition Q, the renovation of 80 fire stations was completed in May 2014.[15]

Measure J, which was approved by voters at the November 7, 2006 election, is a charter amendment and ordinance that involves technical changes to Proposition F. Under Proposition F, the construction of new regional fire stations to provide training and other

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[10] *City of Los Angeles Department of Public Works, Bureau of Engineering, Proposition F, Facilities Bond, https://eng.lacity.org/fire_bond, accessed November 15, 2020.*

[11] *City of Los Angeles Department of Public Works, Bureau of Engineering, Proposition F, Facilities Bond, https://eng.lacity.org/fire_bond, accessed November 15, 2020.*

[12] *City of Los Angeles Department of Public Works, Bureau of Engineering, Newsletter No. 20-5, November 6, 2019.*

[13] *City Administrative Officer Miguel A. Santana to the Mayor and Council, June 30, 2016, City of Los Angeles Inter-Departmental Correspondence: SB 165 Annual Report Requirements for Fiscal Year 2013–2014 Proposition Q Program, Attachment B, Citywide Public Safety Bond Program Annual Report 2014.*

[14] *City Administrative Officer Miguel A. Santana to the Mayor and Council, June 30, 2016, City of Los Angeles Inter-Departmental Correspondence: SB 165 Annual Report Requirements for Fiscal Year 2013–2014 Proposition Q Program, Attachment B, Citywide Public Safety Bond Program Annual Report 2014.*

[15] *City Administrative Officer Miguel A. Santana to the Mayor and Council, June 30, 2016, City of Los Angeles Inter-Departmental Correspondence: SB 165 Annual Report Requirements for Fiscal Year 2013–2014 Proposition Q Program, Attachment B, Citywide Public Safety Bond Program Annual Report 2014.*

facilities at or near standard fire stations was required to take place on single sites of at least two acres. Measure J allows new regional fire stations funded by Proposition F and located in densely developed areas to be designed and built on one or more properties equaling less than two acres.

(g) Los Angeles Fire Department Strategic Plan 2018–2020[16]

The Los Angeles Fire Department Strategic Plan 2018–2020, A Safer City 2.0, is a collaborative effort between LAFD staff, city leaders, and community members to accomplish the LAFD's organizational vision. The Strategic Plan 2018–2020 builds upon the progress of the first Strategic Plan from 2015-2017, which resulted in the achievement of 70 percent of its goals. As provided in the Strategic Plan 2018–2020, five goals will guide the LAFD: (1) Provide exceptional public safety and emergency service; (2) Embrace a healthy, safe and productive work environment; (3) Implement and capitalize on advanced technology; (4) Enhance LAFD sustainability and community resiliency; and (5) Increase opportunities for personal growth and professional development. With implementation of specific strategies, the Strategic Plan 2018–2020 will also align its progress with Mayor Eric Garcetti's four priority outcomes to provide a safe city, a well-run city government, a livable and sustainable city, and a prosperous city.

(h) Reorganization by the LAFD[17]

In January 2015, the LAFD initiated a major reorganization of the Department's Emergency Services Bureau, creating four distinct geographic bureaus, each with a Deputy Chief reporting directly to the LAFD Chief Deputy of Emergency Operations. The objective of this reorganization is for each new Bureau Commander and their staff to establish a more effective and responsive business model than was previously possible through the traditional rotating shift, platoon duty system. The bureaus were organized to operate during normal weekday business hours and allow bureau commanders and staff to be available 24 hours each day to respond to significant emergencies.

The four bureaus, Central (at Fire Station No. 3 near the Civic Center), South (at the San Pedro City Hall complex), Valley (at Fire Station No. 88 in Sherman Oaks) and West (at Fire Station No. 82 in Hollywood), bring the LAFD more in line with the established organizational model now in use by the LAPD. Similar to the LAPD, the new four bureau system intends to make the LAFD more effective and responsive to community needs.

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[16] *LAFD, Strategic Plan 2018–2020.*

[17] *LAFD Implements New Bureau Command Structure, January 12, 2015, http://lafd.org/news/lafd-implements-new-bureau-command-structure, accessed November 15, 2020.*

b. Existing Conditions

(1) Fire Protection Services and Facilities

The LAFD serves as the City's life safety agency with approximately 3,435 uniformed fire personnel, providing fire prevention, firefighting, emergency medical care, technical rescue, hazardous materials mitigation, disaster response, public education, and community services.[18] A total of 1,018 firefighters are always on duty at fire department facilities citywide, including the 106 neighborhood fire stations strategically located across the LAFD's 469-square-mile jurisdiction. In addition, the LAFD is supported by 381 technical and administrative personnel.[19]

As shown in Figure IV.H.1-1 on page IV.H.1-10, there are two LAFD fire stations located within a 2-mile radius of the Project Site. The closest station to the Project Site is Fire Station No. 92, which is the designated "first-in" station, located approximately 0.8 mile southwest of the Project Site at 10556 West Pico Boulevard.[20] As provided by the LAFD and summarized in Table IV.H.1-1 on page IV.H.1-11, Fire Station No. 92 consists of a task force (includes an aerial ladder fire engine/truck company and two single engines), a paramedic rescue ambulance, and a basic life support (BLS) rescue ambulance, and a staff of 12. [21]

The secondary fire station that serves the Project Site is Fire Station No. 59, which is located approximately 1.9 miles southwest of the Project Site at 11505 West Olympic Boulevard. [22] Fire Station No. 59 consists of an assessment engine, paramedic rescue ambulance, emergency medical services (EMS) Battalion Captain, rehab air tender, and a staff of six.[23]

The LAFD also identified three additional fire stations beyond a 2-mile radius of the Project Site that could serve the Project Site. Fire Station No. 43, which is located approximately 2.6 miles south of the Project Site at 3690 S. Motor Avenue, consists of an

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[18] *LAFD, Our Mission, www.lafd.org/about/about-lafd/our-mission, accessed August 11, 2020.*

[19] *LAFD, Our Mission, www.lafd.org/about/about-lafd/our-mission, accessed August 11, 2020.*

[20] *LAFD, Find Your Station, www.lafd.org/fire-stations/station-results, accessed November 15, 2020.*

[21] *Written correspondence from Ralph M. Terrazas, Fire Chief, and Kristen Crowley, Fire Marshal, Bureau of Fire Prevention and Public Safety, Los Angeles Fire Department, July 12, 2019.*

[22] *Written correspondence from Ralph M. Terrazas, Fire Chief, and Kristen Crowley, Fire Marshal, Bureau of Fire Prevention and Public Safety, Los Angeles Fire Department, July 12, 2019.*

[23] *Written correspondence from Ralph M. Terrazas, Fire Chief, and Kristen Crowley, Fire Marshal, Bureau of Fire Prevention and Public Safety, Los Angeles Fire Department, July 12, 2019.*

Figure IV.H.1-1
Fire Stations in the Vicinity of the Project Site

Source: Apple Maps, 2019; Eyestone Environmental, 2019.

Table IV.H.1-1
Los Angeles Fire Department Fire Stations Located in the Vicinity of the Project Site

Station No., Location, and Community Served	Distance from Project Site	Equipment	Staffing
Fire Station No. 92 10556 W. Pico Boulevard Los Angeles, CA 90064	0.8 mile	• Task Force • Paramedic Rescue Ambulance • BLS Rescue Ambulance	• 12 staff
Fire Station No. 59 11505 W. Olympic Boulevard Los Angeles, CA 90064	1.9 miles	• Assessment Engine • Paramedic Rescue Ambulance • EMS Battalion Captain • Rehab Air Tender	• 6 staff
Fire Station No. 43 3690 S. Motor Avenue Los Angeles, CA 90034	2.6 miles	• Engine • Paramedic Rescue Ambulance	• 6 staff
Fire Station No. 58 1556 S. Robertson Boulevard Los Angeles, CA 90035	2.7 miles	• Assessment Engine • Paramedic Rescue Ambulance • BLS Rescue Ambulance	• 8 staff
Fire Station No. 37 1090 Veteran Avenue Los Angeles, CA 90024	2.8 miles	• Task Force • Paramedic Rescue Ambulance	• 14 staff

Source: Correspondence with Ralph M. Terrazas, Fire Marshal, and Kristen Crowley, Fire Marshal, Bureau of Fire Prevention and Public Safety, Los Angeles Fire Department, July 12, 2019.

engine, paramedic rescue ambulance, and a staff of six.[24] Fire Station No. 58, located approximately 2.7 miles east of the Project Site at 1556 S. Robertson Boulevard, consists an assessment engine, paramedic rescue ambulance, a BLS rescue ambulance, and a staff of eight. Fire Station No. 37, located approximately 2.8 miles northwest of the Project Site at 1090 Veteran Avenue, consists of a task force, paramedic rescue ambulance, and a staff of 14.[25]

The response times for January 2019 to December 2019 are shown in Table IV.H.1-2 on page IV.H.1-12. LAFD has not established response time standards for emergency response, nor adopted the National Fire Protection Associated (NFPA) standard of

[24] *Written correspondence from Ralph M. Terrazas, Fire Chief, and Kristen Crowley, Fire Marshal, Bureau of Fire Prevention and Public Safety, Los Angeles Fire Department, July 12, 2019.*

[25] *Written correspondence from Ralph M. Terrazas, Fire Chief, and Kristen Crowley, Fire Marshal, Bureau of Fire Prevention and Public Safety, Los Angeles Fire Department, July 12, 2019.*

Table IV.H.1-2
Average Emergency Medical Service and Structure Fire Response Times

Station	Average Response Time to Emergency Medical Service Incident (Minutes:Seconds)	Average Response Time to Non-Emergency Medical Services (Minutes:Seconds)
Fire Station No. 92	7:24	6:29
Fire Station No. 59	6:31	6:30
Fire Station No. 43	6:18	6:13
Fire Station No. 58	7:03	7:02
Fire Station No. 37	7:00	6:32

[a] *Response times are based on January 2019–December 2019 data.*

Source: *LAFD: FireStatLA, Station 92 Response Metrics for January–December 2019, www.lafd.org/fsla/stations-map?st=731&year=2019, accessed August 11, 2020; FireStatLA, Station 59 Response Metrics for January–December 2019, www.lafd.org/fsla/stations-map?st=571&year=2019, accessed August 11, 2020; FireStatLA, Station 43 Response Metrics for January–December 2019, www.lafd.org/fsla/stations-map?st=506&year=2019, accessed August 11, 2020; FireStatLA, Station 58 Response Metrics for January-December 2019, www.lafd.org/fsla/stations-map?st=566&year=2019, accessed August 11, 2020; FireStatLA, Station 37 Response Metrics for January–December 2019, www.lafd.org/fsla/stations-map?st=476&year=2019, accessed August 11, 2020.*

5 minutes for emergency medical services response and 5 minutes 20 seconds for fire suppression response.[26]

Roadway congestion, intersection level of service (LOS), weather conditions, and construction traffic along a response route can affect response time. Generally, multi-lane arterial roadways allow emergency vehicles to travel at higher rates of speed and permit other traffic to maneuver out of a path of an emergency vehicle. Additionally, the LAFD, in collaboration with the Los Angeles Department of Transportation (LADOT), developed a Fire Preemption System (FPS), a system that automatically turns traffic lights to green for emergency vehicles traveling along designated City streets to aid in emergency response.[27] The City has over 205 miles of major arterial routes that are equipped with FPS.[28]

[26] *NFPA, NFPA 1710—Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, 2016 Edition. Response time is turnout time plus travel time for emergency medical service and fire suppression incidents.*

[27] *LADOT, Los Angeles Signal Synchronization Fact Sheet.*

[28] *LAFD, Training Bulletin: Traffic Signal Preemption System for Emergency Vehicles, Bulleting No. 133, October 2008.*

According to the LAFD, although response times can be considered to assess the adequacy of fire protection and emergency medical services, it is one factor among several that LAFD utilizes in considering its ability to respond to fires and life and health safety emergencies, including required fire flow, response distance from existing fire stations, and the LAFD's judgment for needs in an area. If the number of incidents in a given area increases, it is the LAFD's responsibility to assign new staff and equipment, as necessary, to maintain adequate levels of service. In conformance with the California Constitution Article XIII, Section 35(a)(2) and the *City of Hayward v. Board Trustees of California State University* (2015) 242 Cal. App. 4th 833, 847 ruling, the City has and will continue to meet its legal obligations to provide adequate public safety services, including fire protection and emergency medical services.

(2) Emergency Access

As described in Section II, Project Description, of this Draft EIR, vehicular access, including emergency vehicle access, to the Project Site is currently available via several driveways along Bellwood Avenue.

(3) Fire Water Infrastructure

As discussed in the Utility Report, included as Appendix J of this Draft EIR, in addition to providing domestic water service, the Los Angeles Department of Water and Power (LADWP) also provides water for firefighting services in accordance with the City of Los Angeles Fire Code (LAMC Chapter V, Article 7). Water service is currently provided to the Project Site via LADWP water lines within adjacent streets. Specifically, as discussed in the Utility Report, record drawings provided by LADWP show that a 4-inch water line splits the northernly and southernly portions of the property in the existing Bellwood Avenue alignment, connecting to a 6-inch main line along Olympic Boulevard. Additionally, another existing 12-inch main line runs along the south side of Olympic Boulevard. In addition, there are two existing fire hydrants located within 300 feet of the Project Site boundary, along the north side of Olympic Boulevard fronting the neighboring properties.

(4) Fire Hazard Areas

There are no wildlands located adjacent to or in the vicinity of the Project Site. In addition, the Project Site is not located within a City-designated Very High Fire Hazard Severity Zone.[29] Therefore, the Project Site is not located within a fire hazard area.

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[29] *City of Los Angeles Department of City Planning, ZIMAS, Parcel Profile Report, for APNs 4315018034, 4315018033, 4315018032, 4315018031, 4315018030, and 4315018029.*

3. Project Impacts

a. Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, a project would have a significant impact related to fire protection if it would:

Threshold (a): Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities (i.e., fire), need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

For this analysis the Appendix G threshold listed above is relied upon. The analysis utilizes factors and considerations identified in the City's 2006 L.A. CEQA Thresholds Guide, as appropriate to assist in answering the Appendix G threshold.

The L.A. CEQA Thresholds Guide states that the determination of significance shall be made on a case-by-case basis, considering the following criteria to evaluate fire protection:

- A project would normally have a significant impact on fire protection if it requires the addition of a new fire station or the expansion, consolidation or relocation of an existing facility to maintain service.

b. Methodology

Project impacts regarding fire services are evaluated on a project-by-project basis. A project's land use, fire-related needs, and whether the project site meets the recommended response distance and fire safety requirements, as well as project design features that would reduce or increase the demand for fire protection and emergency medical services, are taken into consideration. Beyond the standards set forth in the Los Angeles Fire Code, consideration is given to the project size and components, required fire-flow, response distance for engine and truck companies, fire hydrant sizing and placement standards, access, and potential to use or store hazardous materials. Further evaluation of impacts considers whether or not the development of the project would create the need for a new fire station or expansion, relocation, or consolidation of an existing facility to accommodate increased demand. Consultation with the LAFD is also conducted to determine the project's effect on fire protection and emergency medical services.

The need for or deficiency in adequate fire protection in and of itself is not a CEQA impact, but rather a social and/or economic impact. Where a project causes a need for additional fire protection services resulting in the need to construct new facilities or additions to existing facilities, and the construction results in a potential impact to the environment, then the impact would need to be assessed in an EIR and mitigated, if found to be significant. The ultimate determination of whether a project would result in a significant impact to the environment related to fire protection is determined by whether construction of new or expanded fire protection facilities is a reasonably foreseeable direct or indirect effect of the Project.

There are no current capital improvement plans for the construction or expansion of fire facilities in the Project area. Therefore, the City makes the following assumptions based on existing zoning standards and based on historical development of fire and emergency facilities, that in the event that the City determines that expanded or new emergency facilities are warranted, such facilities: (1) would occur where allowed under the designated land use; (2) would be located on parcels that are infill opportunities on lots that are between 0.5 acre and 1 acre in size; and (3) could qualify for a categorical exemption or Mitigated Negative Declaration under CEQA Guidelines Sections 15301 or 15332.

c. Project Design Features

No project design features are proposed with regard to fire protection. However, as discussed in Section II, Project Description, of this Draft EIR, as an eldercare facility, caregivers and staff will be trained in senior care and emergency response, and nurses would also be located on-site. In addition, as discussed in Section IV.I, Transportation, of this Draft EIR, pursuant to Project Design Feature TR-PDF-1, the Project would implement a construction management plan that would include provisions for maintaining emergency access to the Project Site during construction.

d. Analysis of Project Impacts

Threshold (a): Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services?

(1) Impact Analysis

(a) Construction

Construction activities have the potential to result in accidental on-site fires by exposing combustible materials (e.g., wood, plastics, sawdust, coverings and coatings) to fire risks from machinery and equipment sparks, and from exposed electrical lines, chemical reactions in combustible materials and coatings, and lighted cigarettes. Given the nature of construction activities and the work requirements of construction personnel, OSHA developed safety and health provisions for implementation during construction, which are set forth in 29 Code of Federal Regulations, Part No. 1926, as discussed further above in Subsection 2.a(1)(a). In accordance with these regulations, construction managers and personnel would be trained in emergency response and fire safety operations, which include the monitoring and management of life safety systems and facilities, such as those set forth in the Safety and Health Regulations for Construction established by OSHA.[30] Additionally, in accordance with the provisions of OSHA, fire suppression equipment (e.g., fire extinguishers) specific to construction would be maintained on-site.[31] Project construction would also occur in compliance with all applicable federal, state, and local requirements concerning the handling, disposal, use, storage, and management of hazardous materials. Thus, compliance with regulatory requirements would effectively reduce the potential for Project construction activities to expose people to the risk of fire or explosion related to hazardous materials and non-hazardous combustible materials.

Project construction could also potentially impact the provision of existing LAFD services in the vicinity of the Project Site as a result of construction impacts to the surrounding roadways. As part of the Project, the portion of Bellwood Avenue that bifurcates the Project Site would be vacated and realigned. Therefore, construction activities would occur along the existing portion of Bellwood Avenue within the Project Site. Construction of the Project and the realignment of Bellwood Avenue would require temporary rerouting of vehicular and pedestrian traffic. However, outside of the realignment area of Bellwood Avenue, travel lanes would be maintained in each direction on all streets around the Project Site throughout the construction period, and emergency access would be maintained and would not be impeded, including emergency access to

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[30] *United States Department of Labor. Occupational Safety & Health Administration. Title 29 CFR, Part No. 1926, Part Title: Safety and Health Regulations for Construction, Subpart F, Subpart Title: Fire Protection and Prevention, www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10671, accessed November 15, 2020.*

[31] *United States Department of Labor. Occupational Safety & Health Administration. Title 29 CFR, Part No. 1926, Part Title: Safety and Health Regulations for Construction, Subpart F, Subpart Title: Fire Protection and Prevention, www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10671, accessed November 15, 2020.*

properties adjacent to the Project Site. In addition, as discussed in Section IV.I, Transportation, of this Draft EIR, a Construction Management Plan would be implemented during Project construction pursuant to Project Design Feature TR-PDF-1 in Section IV.I, Transportation, of this Draft EIR, to ensure that adequate and safe access is available within and near the Project Site during construction activities. Specifically, construction work or equipment parking on adjacent streets would be prohibited and construction activity associated with the new building and on-site improvements would be contained within the Project Site. Appropriate construction traffic control measures (e.g., flag persons) would also be utilized to ensure emergency access to the Project Site and traffic flow is maintained on adjacent rights-of-way.

Construction activities would also generate traffic associated with the movement of construction equipment, the hauling of soil and construction materials to and from the Project Site, and construction worker traffic. Thus, although construction activities would be short-term and temporary for the area, Project construction activities could temporarily impact emergency access. However, with implementation of Project Design Feature TR-PDF-1, the majority of construction-related traffic, including hauling activities and construction worker trips would occur outside the typical weekday commuter A.M. and P.M. peak periods, thereby reducing the potential for traffic-related conflicts. The Project would also employ temporary traffic controls such as flag persons to control traffic movement during temporary traffic flow disruptions. Traffic management personnel would be trained to assist in emergency response by restricting or controlling the movement of traffic that could interfere with emergency vehicle access. Appropriate construction traffic control measures (e.g., detour signage, delineators, etc.) would also be implemented, as necessary, to ensure emergency access to the Project Site and traffic flow is maintained on adjacent rights-of-way. Furthermore, pursuant to California Vehicle Code Section 21806, the drivers of emergency vehicles are able to avoid traffic by using sirens to clear a path of travel or by driving in the lanes of opposing traffic.

Based on the above, construction of the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, nor the need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain service. Therefore, impacts related to fire protection during Project construction would be less than significant.

(b) Operation

(i) Facilities, Equipment, and Response Distance

The Project Site would continue to be served by Fire Station No. 92, which is the designated “first-in” station for the Project Site, located approximately 0.8 mile southwest of the Project Site at 10556 West Pico Boulevard. As provided by the LAFD and summarized

in Table IV.H.1-1 on page IV.H.1-11, Fire Station No. 92 is equipped with a task force (includes an aerial ladder fire engine/truck company and two single engines), a paramedic rescue ambulance, a BLS rescue ambulance, and a staff of 12. As such, based on criteria regarding response distance per LAMC Section 57.507.3.3, the Project Site is located within the required one-mile response distance from a fire station with an engine company and within the 1.5 miles response distance from a fire station with a truck company. In addition, the LAFD has determined fire protection (based on the response distance from existing fire stations criteria) to be adequate.[32]

As discussed in Section II, Project Description, of this Draft EIR, the Project would construct 192 senior housing residential units, including 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms. Based on the generation rates used in the City of Los Angeles VMT Calculator, the Project would generate approximately 231 residents.[33] The Project is also estimated to generate approximately 88 employees.[34]

As discussed in Section II, Project Description, of this Draft EIR, the Project Site is currently developed with three multi-family residential developments, consisting of 112 units, and associated structures and parking. To accommodate the Project's proposed uses, all existing structures would be removed. Assuming the existing units are each occupied by one person[35], the Project would result in a net increase of 119 on-site residents[36] plus approximately 88 employees on a given day. Therefore, the Project would

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[32] *Written correspondence from Ralph M. Terrazas, Fire Chief, and Kristen Crowley, Fire Marshal, Bureau of Fire Prevention and Public Safety, Los Angeles Fire Department, July 12, 2019.*

[33] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H. The VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would result in a net increase of 132 residents as compared to 119 residents. For the same reasons described below, even with a net increase of 132 residents, Project operation would not require the addition of a new fire station or the expansion of an existing facility in order to maintain service, and the conclusions of the analysis would remain the same.*

[34] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H.*

[35] *To provide a conservative analysis, the existing fire service population accounts for an existing residential population of 112 assuming one person within each occupied unit rather than the 2.25 persons per unit for "Multi-Family Residential" land use provided by the City of Los Angeles VMT Calculator Documentation Guide. The majority of the existing housing units are studio units, and the existing units range in size from approximately 275 to 375 square feet.*

[36] *As noted above, the VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would result in a net increase of 132 residents as compared to 119 residents. For the same reasons described below, even with a net increase of 132 residents, Project operation would not require the addition of a new fire station or the expansion of an existing facility in order to maintain service, and the conclusions of the analysis would remain the same.*

increase the building area and daytime population of the Project Site compared to existing conditions. As such, the Project would increase the demand for LAFD fire protection services.

The proposed uses would be expected to generate a range of fire service calls similar to other typical residential uses. The Project would not include any unique or especially hazardous uses, such as industrial facilities, that use or generate large quantities of hazardous and/or toxic materials that could pose an extreme risk of serious accident or fire at the Project Site. The types of fires that could potentially occur within the Project Site would be adequately suppressed with the fire equipment found at the fire stations nearest the Project Site.

The Project would implement all applicable Los Angeles Building Code and Fire Code requirements regarding structural design, building materials, site access, fire flow, storage and management of hazardous materials, alarm and communications systems, etc., including as set forth in the written correspondence from the LAFD included in Appendix G of this Draft EIR. Compliance with applicable City Building Code and Fire Code requirements would be confirmed as part of LAFD's fire/life safety plan review and fire/life safety inspection for new construction projects, as set forth in LAMC Section 57.118, and which are required prior to the issuance of a building permit.

Compliance with applicable regulatory requirements, including LAFD's fire/life safety plan review and LAFD's fire/life safety inspection for new construction projects, would ensure that adequate fire prevention features would be provided that would reduce the demand on LAFD facilities and equipment resulting from the Project. As such, compliance with Fire Code requirements would minimize the potential for incidents requiring an emergency response by LAFD and therefore reduce the need for a new fire station, or the expansion, consolidation, or relocation of an existing fire station. In addition, in accordance with the fire protection-related goals, objectives, and polices set forth in the Framework Element, the Safety Element, and the West Los Angeles Community Plan, as listed in the regulatory framework above and as confirmed in the written correspondence from the LAFD, the City along with LAFD would continue to monitor the demand for existing and projected fire facilities (refer to Objective 9.16 of the Framework Element, Policy 2.1.6 of the Safety Element, and Fire Protection Objective 9-1 of the West Los Angeles Community Plan), and coordinate the development of new fire facilities to be phased with growth (Objective 9.18 of the Framework Element).

(ii) Emergency Access

As discussed in Section II, Project Description, of this Draft EIR, vehicular access, including emergency access, to the Project Site would be provided along Bellwood Avenue from Olympic Boulevard. While the portion of Bellwood Avenue that bifurcates the Project

Site would be vacated and realigned, and may become a private street, continuous public access through Bellwood Avenue would be maintained, and emergency access to the Project Site and surrounding area would continue to be provided. Additionally, the proposed realignment would comply with the City's applicable requirements, including emergency access requirements set forth by the Los Angeles Department of Building and Safety and LAFD.

The Project's driveways and internal circulation would be designed to meet all applicable City Building Code and Fire Code requirements regarding site access, including providing adequate emergency vehicle access as set forth in the written correspondence from the LAFD included in Appendix G of this Draft EIR. Additionally, the area surrounding the Project Site includes an established street system, consisting of primary and secondary arterials, and collector and local streets, which provide sub-regional, and local access and circulation within the Project's traffic study area. Based on the Project Site's location within a highly urbanized area of the City, the streets surrounding the Project Site were designed as standard streets in terms of pavement width and thickness, curb and gutter, and horizontal and vertical curvature. Therefore, the street system surrounding the Project Site is not considered substandard. Furthermore, drivers of emergency vehicles have the ability to avoid traffic by using sirens and flashing lights to clear a path of travel, pursuant to CVC Section 21806. As such, emergency access to the Project Site and surrounding uses would be maintained at all times.

Compliance with applicable City Building Code and Fire Code requirements, including emergency vehicle access, would be confirmed as part of LAFD's fire/life safety plan review and fire/life safety inspection for new construction projects, as set forth in LAMC Section 57.118, and which are required prior to the issuance of a building permit. The Project also would not include the installation of barriers that could impede emergency vehicle access, and emergency access to the Project Site and the surrounding area would be maintained.

(iii) Fire Flow

As discussed in the Utility Report, included as Appendix J of this Draft EIR, domestic and fire water service to the Project Site would continue to be supplied by LADWP. Fire flow to the Project Site would be required to meet City fire flow requirements as set forth in Section 57.507.3.1 of the LAMC, which establishes fire flow standards by development type. As identified by the LAFD in their written correspondence, provided in Appendix G of this Draft EIR, the Project has a required fire flow of 6,000 to 9,000 gpm from four to six adjacent fire hydrants flowing simultaneously. In addition, all hydrants must be spaced to provide adequate coverage of building exterior.

As discussed in the Utility Report, a Service Advisory Request (SAR) was submitted to LADWP to determine if the existing public water system will have adequate water pressure to serve the Project's anticipated fire and domestic water needs. LADWP has indicated that the existing 4-inch line in Bellwood Avenue would require abandonment. In addition, an 8-inch line approximately 250 feet in length would be required to be installed within the easterly drive aisle of Bellwood Avenue and an 8-inch line approximately 213 feet in length would be required to be installed in the westerly drive aisle of Bellwood Avenue. The two new 8-inch lines would tie into the 12-inch main in Olympic Boulevard.

Furthermore, as set forth in LAMC Section 57.507.3, land uses considered under the Industrial and Commercial category require one hydrant per 80,000 square feet of land with a 300-foot distance between hydrants, and 2.5-inch by 4-inch double fire hydrant or 4-inch by 4-inch double fire hydrants. Regardless of land use, every first story of a residential, commercial, and industrial building must be within 300 feet of an approved hydrant. As described in the Utility Report, an Information of Fire Flow Availability (IFFAR) was submitted to LADWP for the two existing fire hydrants as well as for the two proposed private fire hydrants, which would be located within the private drive aisle fronting the building and behind the building. Based on the completed IFFAR, the two existing fire hydrants, the two proposed fire hydrants, and the proposed 8-inch water lines discussed above would be adequate to provide the required fire coverage. If later required by the LAFD during their standard building permit fire/life safety plan review, the Project would install additional fire hydrant(s) to meet the hydrant spacing requirements as set forth in LAMC Section 57.507.3.2. The number and location of hydrants would be determined as part of LAFD's fire/life safety plan review for the Project.

(iv) Conclusion

Based on the analysis above, Project operation would not require the addition of a new fire station or the expansion of an existing facility in order to maintain service. **Therefore, operation of the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities (fire protection), the construction of which would cause significant environmental impacts, in order to maintain acceptable fire protection services. Project impacts would be less than significant.**

(2) Mitigation Measures

Project-level impacts related to fire protection would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to fire protection were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

e. Cumulative Impacts

(1) Impact Analysis

The geographic context for the cumulative impact analysis for fire protection services is the service areas of Fire Station Nos. 92, 59, 43, 58, and 37. The Project, in conjunction with growth forecasted in the City through 2023 (i.e., the Project buildout year), would cumulatively generate a demand for fire protection services, thus potentially resulting in cumulative impacts on fire protection services. Cumulative growth in the greater Project area through 2023 includes six known development projects, growth that may be projected as a result of the land use designation and policy changes contained in the West Los Angeles Community Plan Update, as well as general ambient growth, as described in Section III, Environmental Setting, of this Draft EIR.

As discussed in Section III, Environmental Setting, of this Draft EIR, the projected growth reflected by Related Project Nos. 1 through 6 is a conservative assumption, as some of the related projects may not be built out by 2023 (i.e., the Project buildout year), may never be built, or may be approved and built at reduced densities. To provide a conservative forecast, the future baseline forecast assumes that Related Project Nos. 1 through 6 are fully built out by 2023, unless otherwise noted.

A number of the identified related projects and ambient growth projections fall within the service areas of Fire Station Nos. 92, 59, 43, 58, and 37. The increase in development and service populations from the Project, related projects, as well as other future development in the West Los Angeles Community Plan area would result in a cumulative increase in the demand for LAFD services. As concluded in the written correspondence from the LAFD included in Appendix G of this Draft EIR, development of the Project as well as the related Projects could result in the need for increased staffing, additional fire protection facilities, and the relocation of present fire protection facilities. However, similar to the Project, the related projects and other future development projects in the West Los Angeles Community Plan area would be reviewed by the LAFD to ensure that sufficient fire safety and hazards measures are implemented to reduce potential impacts to fire protection and emergency medical services. Moreover, given that the Project Site is located within an urban area, the related projects identified in the area would also be developed within urbanized locations that fall within an acceptable distance from one or more existing fire stations. Furthermore, each related project and other future development

projects in the West Los Angeles Community Plan area would be required to comply with regulatory requirements related to fire protection. In addition, the Project, related projects, and other future development projects in the West Los Angeles Community Plan area would be subject to the City's standard construction permitting process, which includes a review by LAFD for compliance with building and site design standards related to fire/life safety, as well as coordinating with LADWP to ensure that local fire flow infrastructure meets current code standards for the type and intensity of land uses involved.

Like the Project, the related projects and other future development projects in the West Los Angeles Community Plan area would also generate revenues to the City's General Fund (in the form of property taxes, sales revenue, etc.) that could be applied toward the provision of new fire station facilities and related staffing, as deemed appropriate.[37] Cumulative increases in demand for fire protection and emergency medical services due to related projects and other future development projects in the West Los Angeles Community Plan area would be identified and addressed through the City's annual programming and budgeting processes. LAFD resource needs would be identified and monies allocated according to the priorities at the time. Any requirement for a new fire station, or the expansion, consolidation, or relocation of an existing fire station would also be identified through this process, the impacts of which would be addressed accordingly. Furthermore, over time, LAFD would continue to monitor population growth and land development throughout the City and identify additional resource needs, including staffing, equipment, trucks and engines, ambulances, other special apparatuses, and possibly station expansions or new station construction, which may become necessary to achieve the required level of service.

Additionally, consistent with *City of Hayward v. Board Trustees of California State University* (2015) 242 Cal.App.4th 833 ruling and the requirements stated in the California Constitution Article XIII, Section 35(a)(2) discussed in Subsection 2.a.(1)(d) above, the obligation to provide adequate fire protection services is the responsibility of the City. Through the City's regular budgeting efforts, LAFD's resource needs, including staffing, equipment, trucks and engines, ambulances, other special apparatuses and possibly station expansions or new station construction, would be identified and allocated according to the priorities at the time. At this time, LAFD has not identified any new station construction in the area impacted by this Project either because of this Project or other projects in the service area. However, if a new fire station, or the expansion, consolidation, or relocation of an existing station was determined to be warranted by LAFD, such facilities: (1) would occur where allowed under the designated land use; (2) would be located on parcels that are infill opportunities on lots that are between 0.5 and 1 acre in size; and (3) could qualify for a categorical exemption or Mitigated Negative Declaration under CEQA

[37] *City of Los Angeles, Proposed Budget for the Fiscal Year 2018–19.*

Guidelines Section 15301 or 15332.[38] Therefore, development of a station at this scale is unlikely to result in significant impacts, and projects involving the construction or expansion of a fire station would be addressed independently pursuant to CEQA.

Based on the above, the Project and related projects would not result in significant cumulative impacts associated with the provision of new or physically altered government facilities (i.e., fire), need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain service. As such, the Project's contribution to cumulative impacts on fire protection during construction and operation would not be cumulatively considerable, and cumulative impacts would be less than significant.

(2) Mitigation Measures

Cumulative impacts related to fire protection would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts related to fire protection were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

[38] *Although an EIR was prepared for the construction of LAFD Fire Station No. 39, the EIR concluded there would be no significant impacts. See Notice of Determination for Van Nuys Fire Station 39.*

IV. Environmental Impact Analysis

H.2 Public Services—Police Protection

1. Introduction

This section of the Draft EIR describes existing police protection services within the Project area and provides an analysis of the Project's potential impacts related to police protection facilities. The focus of the analysis is the Los Angeles Police Department (LAPD) facilities that currently serve the Project Site. This section is based in part on information provided by the LAPD's Community Relationship Division, in a letter dated July 29, 2019, which is included in Appendix G of this Draft EIR.

2. Environmental Setting

a. Regulatory Framework

(1) State

(a) California Constitution Article XIII, Section 35

Section 35 of Article XIII of the California Constitution at subdivision (a)(2) provides: "The protection of public safety is the first responsibility of local government and local officials have an obligation to give priority to the provision of adequate public safety services." Section 35 of Article XIII of the California Constitution was adopted by the voters in 1993 under Proposition 172. Proposition 172 directed the proceeds of a 0.50-percent sales tax to be expended exclusively on local public safety services. California Government Code Sections 30051-30056 provide rules to implement Proposition 172. Public safety services include police protection. Section 30056 mandates that cities are not allowed to spend less of their own financial resources on their combined public safety services in any given year compared to the 1992–93 fiscal year. Therefore, an agency is required to use Proposition 172 to supplement its local funds used on police protection services, as well as other public safety services. In *City of Hayward v. Board of Trustees of California State University* (2015) 242 Cal. App. 4th 833, the court found that Section 35 of Article XIII of the California Constitution requires local agencies to provide public safety

services and that it is reasonable to conclude that the city will comply with that provision to ensure that public safety services are provided.[1]

(b) California Vehicle Code

Section 21806 of the California Vehicle Code pertains to emergency vehicles responding to Code 3 incidents/calls.[2] This section of the California Vehicle Code states the following:

> *Upon the immediate approach of an authorized emergency vehicle which is sounding a siren and which has at least one lighted lamp exhibiting red light that is visible, under normal atmospheric conditions, from a distance of 1,000 feet to the front of the vehicle, the surrounding traffic shall, except as otherwise directed by a traffic officer, do the following: (a)(1) Except as required under paragraph (2), the driver of every other vehicle shall yield the right-of-way and shall immediately drive to the right-hand edge or curb of the highway, clear of any intersection, and thereupon shall stop and remain stopped until the authorized emergency vehicle has passed. (2) A person driving a vehicle in an exclusive or preferential use lane shall exit that lane immediately upon determining that the exit can be accomplished with reasonable safety…. (c) All pedestrians upon the highway shall proceed to the nearest curb or place of safety and remain there until the authorized emergency vehicle has passed.*

(2) Local

(a) Los Angeles General Plan Framework Element

The City of Los Angeles General Plan Framework Element (Framework Element), adopted in December 1996 and readopted in August 2001, sets forth general guidance regarding land use issues for the entire City and defines citywide policies regarding land use, including infrastructure and public services. Goal 9I of the Infrastructure and Public Services Chapter of the Framework Element specifies that every neighborhood must have the necessary police services, facilities, equipment, and manpower required to provide for the public safety needs of that neighborhood.[3] Objective 9.13 and Policy 9.13.1 require the monitoring and reporting of police statistics and population projections for the purpose of

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[1] *City of Hayward v. Board of Trustees of California State University (2015) 242 Cal. App. 4th 833, 847.*

[2] *A Code 3 response to any emergency may be initiated when one or more of the following elements are present: a serious public hazard, an immediate pursuit, preservation of life, a serious crime in progress, and prevention of a serious crime. A Code 3 response involves the use of sirens and flashing red lights.*

[3] *The Framework Element of the Los Angeles General Plan, Chapter 9: Infrastructure and Public Services.*

evaluating existing and future police protection needs. Objective 9.14 requires that adequate police services, facilities, equipment, and personnel are available to meet such needs. Furthermore, Objective 9.15 requires police services to provide adequate public safety in emergency situations by maintaining mutual assistance agreements with other local law enforcement agencies, state law enforcement agencies, and the National Guard. In addition to the Framework Element, the City's General Plan Safety Element recognizes that most jurisdictions rely on emergency personnel (police, fire, gas, and water) to respond to and handle emergencies.

Presently, the LAPD operates under a Computer Statistics (COMPSTAT) Plus program that implements the Framework Element goal of assembling statistical population and crime data to determine necessary crime prevention actions. With its specialized crime control model, the COMPSTAT system implements a multi-layer approach to police protection services by providing a program where crime data can be collected, mapped, and analyzed to provide statistical and geographical information of trends in crime. This information provides police departments a "snapshot" of crime activity in their jurisdiction and allows police managers to focus and develop plans to reduce crime in high crime areas.

(b) The City of Los Angeles Charter and Administrative and Municipal Codes

The law enforcement regulations and the powers and duties of the LAPD are outlined in the City of Los Angeles Charter, Article V, Section 570; the City of Los Angeles Administrative Code, Chapter 11, Section 22.240; and the Los Angeles Municipal Code (LAMC), Chapter 5, Article 2.

Article V, Section 570 of the City Charter gives the power and duty to the LAPD to enforce the penal provisions of the City Charter and City ordinances, as well as state and federal law. The City Charter also gives responsibility to the officers of the LAPD to act as peace officers, as defined by state law, and the power and duty to protect lives and property in case of a disaster or public calamity.

(c) West Los Angeles Community Plan

The Project Site is located within the West Los Angeles Community Plan area. The Community Plan, adopted on July 27, 1999, and last amended on September 7, 2016, includes the following objectives and policies that are relevant to police protection:

- Objective 8-1: To provide adequate police facilities, personnel and protection to correspond with existing and future population and service demands.

- Policy 8-1.1: Consult with the Police Department in the review of development projects and land use changes to determine law enforcement needs and requirements.

- Objective 8-2: To increase the ability to minimize crime and provide adequate security.
  - Policy 8-2.1: Support and encourage community based crime prevention efforts (such as Neighborhood Watch) through regular interaction and coordination with existing policing, foot and bicycle patrols, watch programs and regular communication with neighborhood and civic organizations.
  - Policy 8-2.2: Ensure adequate lighting around residential, commercial, and industrial buildings in order to improve security.
  - Policy 8-2.3: Ensure that landscaping around buildings does not impede visibility.

b. Existing Conditions

(1) LAPD Service Area and Bureaus

The LAPD service area covers approximately 468 square miles and is divided into four geographic bureaus: the Central Bureau, the West Bureau, the South Bureau, and the Valley Bureau.[4] These four geographic bureaus are further divided into 21 geographic areas, which are serviced by the LAPD's 21 community police stations.[5] Each geographic bureau is comprised of four to five geographic areas/police stations.[6]

As of December 2019, the departmental staffing resources within the LAPD included 10,033 sworn officers. Based on a total City population of 4,029,741, the LAPD currently has an officer-to-resident ratio of approximately 2.5 officers for every 1,000 residents.[7]

The Project Site is located in the West Bureau, which covers a territory of approximately 124 square miles with a population of approximately 840,400 residents.[8]

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[4] *LAPD, LAPD Organization Chart, www.lapdonline.org/inside_the_lapd/content_basic_view/1063, accessed November 23, 2020.*

[5] *LAPD, Community Police Station Address Directory, www.lapdonline.org/our_communities/content_basic_view/6279, accessed November 23, 2020.*

[6] *LAPD, LAPD Organization Chart, www.lapdonline.org/inside_the_lapd/content_basic_view/1063, accessed November 23, 2020.*

[7] *LAPD, COMPSTAT Unit, COMPSTAT Citywide Profile 12/01/19–12/28/19, http://assets.lapdonline.org/assets/pdf/cityprof.pdf, accessed January 7, 2020.*

The West Bureau oversees operations in Hollywood, Wilshire, Pacific, and West Los Angeles. The West Bureau also oversees the West Traffic Division, which includes the neighborhoods of Pacific Palisades, Westwood, Century City, Venice, Hancock Park, and the Miracle Mile.[9]

(2) LAPD Community Police Station

Within the West Bureau, the Project Site is located within the West Los Angeles service area, which is served by the West Los Angeles Community Police Station. As shown in Figure IV.H.2-1 on page IV.H.2-6, the West Los Angeles Community Police Station is located at 1663 Butler Avenue, approximately 2.6 miles west of the Project Site. The West Los Angeles Police Station service area covers approximately 65.14 square miles and is bounded by Mulholland Drive to the North; the Santa Monica Freeway and Washington Boulevard to the South; the San Diego Freeway, La Cienega Boulevard, and City of Los Angeles boundary to the East; and the Pacific Ocean to the West.[10]

The West Los Angeles Police Station serves a population of approximately 228,000 residents and is staffed by approximately 260 sworn officers and 28 civilian support staff. The average response time for emergency and non-emergency calls of the West Los Angeles Police Station in 2018 was 6.2 minutes and 41.4 minutes, respectively.[11] Based on the police service population of 228,000 residents, the officer-to-resident ratio of the West Los Angeles Police Station is approximately 1.14 officers per 1,000 residents. As such, the existing officer-to-resident ratio in the West Los Angeles Area is lower than the citywide ratio of 2.5 officers per 1,000 residents.

(3) LAPD Crime Statistics

Table IV.H.2-1 on page IV.H.2-7 provides a comparison of the West Los Angeles Area and citywide data regarding crimes as reported by the LAPD based on residential populations only. As shown therein, based on the most recent year to date data made available by the LAPD Community Outreach and Development Division and COMPSTAT, approximately 5,253 crimes were reported within the West Los Angeles Area

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[8] *LAPD, About West Bureau, www.lapdonline.org/west_bureau/content_basic_view/1869, accessed November 23, 2020.*

[9] *LAPD, About West Bureau, www.lapdonline.org/west_bureau/content_basic_view/1869, accessed November 23, 2020.*

[10] *Written correspondence from Christopher Gibson, Community Outreach and Development Division, Los Angeles Police Department, July 29, 2019. See Appendix G of this Draft EIR.*

[11] *Written correspondence from Christopher Gibson, Community Outreach and Development Division, Los Angeles Police Department, July 29, 2019. See Appendix G of this Draft EIR.*

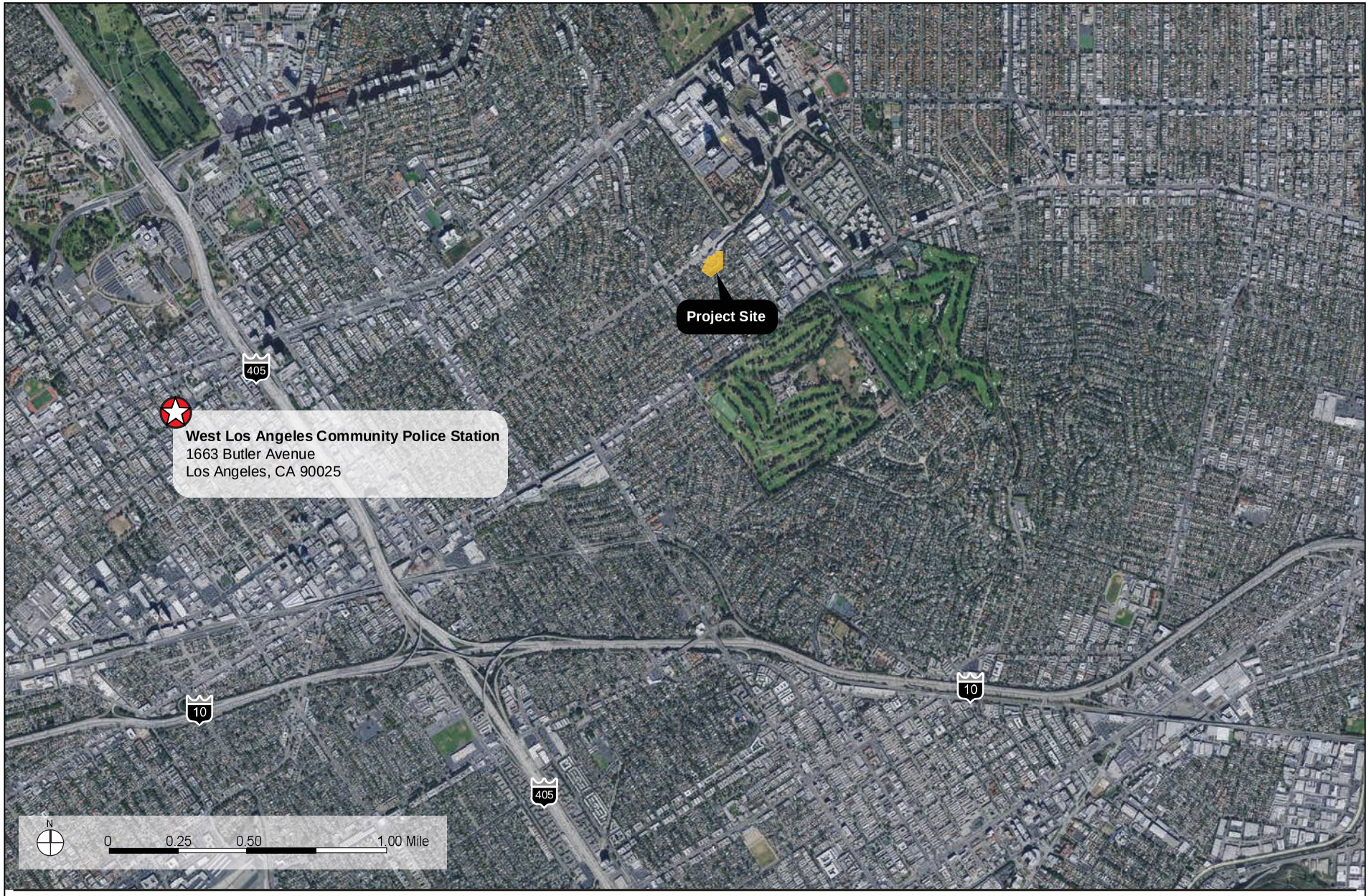

Figure IV.H.2-1
Police Station Serving the Project Site

Source: Apple Maps, 2019; Eyestone Environmental, 2019.

Table IV.H.2-1
2019 YTD Crimes—West Los Angeles Area and Citywide

	Crimes	Population	Crimes per 1,000 Persons	Crimes per Capita
West Los Angeles Area	5,253	228,000	23/1,000	0.023
Citywide	120,828	4,029,741	30/1,000	0.029

Source: LAPD, COMPSTAT Unit, COMPSTAT West Los Angeles Area Profile 12/01/19–12/28/19 and COMPSTAT Citywide Profile 12/01/19–12/28/19.

and 120,828 crimes were reported citywide. Based on the service population of the West Los Angeles Community Police Station, approximately 23 crimes per 1,000 residents (0.023 crime per capita) were reported in the West Los Angeles Area and 30 crimes per 1,000 residents (0.030 crime per capita) were experienced citywide.

Based on the number of sworn officers in the West Los Angeles Community Police Station (260 sworn officers), the current 2019 ratio of crimes per officer is 20.2 crimes per officer in comparison to a 2019 citywide ratio of 12 crimes per officer (10,033 sworn officers citywide). Thus, the West Los Angeles Area has a higher crime per officer ratio compared to the citywide ratio.

3. Project Impacts

a. Thresholds of Significance

In accordance with the State CEQA Guidelines Appendix G, the Project would have a significant impact related to police protection if it would:

Threshold (a): Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities (i.e., police), need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services.

For this analysis, the Appendix G Threshold listed above is relied upon. The analysis utilizes the following factors and considerations identified in the City's 2006 L.A. CEQA Thresholds Guide, as appropriate, to assist in answering the Appendix G threshold question:

- The population increase resulting from the proposed project, based on the net increase of residential units or square footage of non-residential floor area;
- The demand for police services anticipated at the time of project buildout compared to the expected level of service available. Consider as applicable, scheduled improvements to LAPD services (facilities, equipment, and officers) and the project's proportional contribution to the demand; and
- Whether the project includes security and/or design features that would reduce the demand for police services.

b. Methodology

According to the City's L.A. CEQA Thresholds Guide, police service demand relates to the size and characteristics of the community, population, the geographic area served, and the number and the type of calls for service. Changes in these factors resulting from a project may affect the demand for services, and in turn, result in the need for new or physically altered government facilities. As such, the determination of significance relative to impacts on police services is based on the evaluation of existing police services for the police station serving the Project Site, including the availability of police personnel to serve the estimated Project population. The analysis presents statistical data associated with the police station serving the Project Site and citywide services, including the ratio of crimes to residents and the ratio of sworn police officers to residents. In consideration of the above factors, a determination is made as to whether the LAPD would require the addition of a new or physically altered facility to maintain acceptable service levels, the construction of which could result in a potentially significant environmental impact. As part of the analysis, the LAPD was consulted and its responses were incorporated regarding the Project. Project design features that would reduce the impact of the Project on police services are also described.

The need for or deficiency in adequate police services in and of itself is not a CEQA impact, but rather a social and/or economic impact. Where a project causes a need for additional police services resulting in the need to construct new police facilities or additions to existing facilities, and the construction results in a potential impact to the environment, then the impact would need to be assessed in this EIR. The ultimate determination of whether there is a significant impact to the environment related to police services that will result from a project is determined by whether the construction of new or expanded police facilities is a reasonably foreseeable direct or indirect effect of the project.

There are no current capital improvement plans for the construction or expansion of police facilities in the Project area. Therefore, the City makes the following assumptions based on existing zoning standards and based on historical development of police facilities, that in the event that the City determines that expanded or new emergency facilities are

warranted, such facilities: (1) would occur where allowed under the designated land use; (2) would be located on parcels that are infill opportunities on lots that are between 0.5 and 1 acre in size; and (3) could qualify for a categorical exemption or Mitigated Negative Declaration under CEQA Guidelines Section 15301 or 15332.

c. Project Design Features

The following project design features are proposed to increase Project Site security and minimize the Project's demand for police protection services:

Project Design Feature POL-PDF-1: During construction, the Applicant will implement temporary security measures including security fencing, lighting, and locked entry.

Project Design Feature POL-PDF-2: During operation, the Project will include private 24-hour on-site security, a closed circuit security camera system, and keycard entry for the building and the parking areas.

Project Design Feature POL-PDF-3: During operation, the Project will provide sufficient lighting of building entries and walkways to facilitate pedestrian orientation and clearly identify a secure route between parking areas and points of entry into the building.

Project Design Feature POL-PDF-4: During operation, the Project will provide sufficient lighting of parking areas, elevators, and lobbies to maximize visibility and reduce areas of concealment.

Project Design Feature POL-PDF-5: Prior to the issuance of a building permit, the Applicant will submit a diagram of the Project Site to the LAPD's West Los Angeles Area Commanding Officer that includes access routes and any additional information that might facilitate police response.

d. Analysis of Project Impacts

Threshold (a): Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities (i.e., police), need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services?

(1) Impact Analysis

(a) Construction

Construction of the Project would not generate a permanent population on the Project Site that would substantially increase the police service population of the West Los Angeles Area since the daytime population generated at the Project Site during construction would be temporary in nature. However, construction sites can be sources of nuisances and hazards and invite theft and vandalism. When not properly secured, construction sites can contribute to a temporary increased demand for police protection services. Pursuant to Project Design Feature POL-PDF-1, the Applicant would implement temporary security measures, including security fencing, lighting, and locked entry to secure the Project Site during construction. With implementation of these security measures, the potential demand on police protection services at the Project Site associated with theft and vandalism during construction would be reduced.

Construction activities could also potentially affect LAPD response due to reduced capacities of adjacent streets. As discussed in Section IV.I, Transportation, of this Draft EIR, construction activities are expected to be primarily contained within the boundaries of the Project Site. As part of the Project, the portion of Bellwood Avenue that bifurcates the Project Site would be vacated and realigned as a private street. Therefore, construction activities would occur along the existing portion of Bellwood Avenue within the Project Site. Construction of the Project and the realignment of Bellwood Avenue would require temporary rerouting of vehicular and pedestrian traffic. However, outside of the realignment area of Bellwood Avenue, travel lanes would be maintained in each direction on all streets around the Project Site throughout the construction period, and emergency access would be maintained and would not be impeded, including emergency access to properties adjacent to the Project Site. In addition, as discussed in Section IV.I, Transportation, of this Draft EIR, a Construction Management Plan would be implemented during Project construction pursuant to Project Design Feature TR-PDF-1 in Section IV.I, Transportation, of this Draft EIR, to ensure that adequate and safe access is available within and near the Project Site during construction activities. Appropriate construction traffic control measures (e.g., signs, flag persons, etc.) would also be utilized to ensure emergency access to the Project Site and traffic flow is maintained on adjacent rights-of-way. Furthermore, construction-related traffic generated by the Project would not significantly impact LAPD response to the Project Site and vicinity as emergency vehicles have the ability to avoid traffic by using sirens to clear a path of travel or driving in the lanes of opposing traffic, pursuant to CVC Section 21806.

Based on the above, construction activities associated with the Project would not generate a demand for additional police protection services that would necessitate the provision of new or physically altered government facilities. Accordingly, the Project would not result in adverse physical impacts associated

with the construction of new or altered facilities. Therefore, impacts on police protection during Project construction would be less than significant.

(b) Operation

As previously discussed, the LAPD considers the residential population within their service area to evaluate service capacity. The Project would replace the existing residential and visitor population on the Project Site and would increase LAPD's residential service population in the West Los Angeles Area.

As discussed in Section II, Project Description, of this Draft EIR, the Project would construct 192 senior housing residential units, including 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms. As shown in Table IV.H.2-2 on page IV.H.2-12, based on the generation rates used in the City of Los Angeles VMT Calculator , the Project's estimated total police service population would be 231 residents.[12] The Project is also estimated to generate approximately 88 employees.[13]

As discussed in Section II, Project Description, of this Draft EIR, the Project Site is currently developed with three multi-family residential developments, consisting of 112 units, and associated structures and parking. To accommodate the Project's proposed uses, all existing structures would be removed. As shown in Table IV.H.2-2, assuming the 112 units were each occupied by one person and using the City of Los Angeles VMT Calculator population estimate for the Project, the Project would result in a net increase of 119 residents[14] plus approximately 88 employees on a given day. As such, the Project would result in a net increase in the service population requiring police protection services from the LAPD.

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[12] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H. The VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would result in a net increase of 132 residents as compared to 119 residents. The resulting officer-to-resident ratio would be the same, and for the same reasons described below, even with a net increase of 132 residents, Project operation would not result in a need to construct any new police facilities or modify any existing facilities, and the conclusions of the analysis would remain the same.*

[13] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H.*

[14] *As noted above, the VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would result in a net increase of 132 residents as compared to 119 residents. The resulting officer-to-resident ratio would be the same, and for the same reasons described below, even with a net increase of 132 residents, Project operation would not result in a need to construct any new police facilities or modify any existing facilities, and the conclusions of the analysis would remain the same.*

Table IV.H.2-2
Estimated Project Residential Service Population for the Project Site

Land Use	Units	Conversion Factor	Total Police Service Population
Existing			
Residential—Apartments	112 du	1 person/unit[a]	112
Proposed			
Residential—Apartments	192 du		231[b]
Project Net Residential Police Service Population (Proposed – Existing)			***119***

du = dwelling units

[a] *To provide a conservative analysis, the existing police service population accounts for an existing residential population of 112 assuming one person within each occupied unit rather than the 2.25 persons per unit for "Multi-Family Residential" land use provided by the City of Los Angeles VMT Calculator Documentation Guide. The majority of the existing housing units are studio units, and the existing units range in size from approximately 275 to 375 square feet.*

[b] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H. As noted above, the VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would result in a net increase of 132 residents as compared to 119 residents. The conclusions of the analysis would remain the same.*

Source: Eyestone Environmental, 2021.

As discussed above, the West Los Angeles Area, in which the Project Site is located, is served by the West Los Angeles Community Police Station located approximately 2.6 miles west of the Project Site and is staffed by 260 sworn officers and a 28-person civilian support staff. The Project's net residential service population of up to 119 residents would increase the existing police service population of the West Los Angeles Community Police Station from 228,000 persons to up to 228,119 persons. Similar to the current officer-to-resident ratio for the West Los Angeles Area, the increase in police service population would result in an officer-to-resident ratio of 1.14 officers per 1,000 residents. Therefore, the Project would not cause a substantial change in the officer-to-resident ratio for the West Los Angeles Area and West Los Angeles Community Police Station.

As provided above in Project Design Features POL-PDF-2 through POL-PDF-5, the Project would include numerous operational design features to enhance safety within and immediately surrounding the Project Site. Specifically, as set forth in Project Design Feature POL-PDF-2, the Project would private on-site security, a closed circuit security camera system, and keycard entry for the building and the parking areas. In addition, the Project would provide sufficient lighting of buildings and walkways to provide for pedestrian

orientation and to clearly identify a secure route between parking areas and points of entry into buildings, as set forth by Project Design Feature POL-PDF-3, as well as provide sufficient lighting of parking areas, elevators, and lobbies to maximize visibility and reduce areas of concealment, as set forth by Project Design Feature POL-PDF-4. Furthermore, as specified in Project Design Feature POL-PDF-5, the Applicant would submit a diagram of the Project Site to the LAPD's West Los Angeles Area Commanding Officer that includes access routes and any additional information that might facilitate police response. In addition to the implementation of these site security features, the Project would generate revenues to the City's General Fund (in the form of property taxes) that could be applied toward the provision of new police facilities and related staffing in the community, as deemed appropriate.[15] The proposed Project Design Features as well as the Project's contribution to the General Fund would help offset the Project-related increase in demand for police services. Thus, as provided by the LAPD in their letter, included in Appendix G of this Draft EIR, a project of this size could have a minor impact on police services in the West Los Angeles Area.

As described in Section II, Project Description, of this Draft EIR, vehicular access, including emergency vehicle access, to the Project Site would continue to be provided along Bellwood Avenue from Olympic Boulevard. As part of the Project, the portion of Bellwood Avenue that bifurcates the Project Site would be vacated and realigned and may become a private street.[16] Emergency access to all buildings would continue to be provided in accordance with regulatory requirements. In addition, the Project would not include the installation of any barriers (e.g., perimeter fencing, fixed bollards, etc.) that could impede emergency access within or in the vicinity of the Project Site. As such, emergency access to the Project Site and surrounding uses would be maintained at all times. The Project would also result in a net decrease in daily traffic in the Project vicinity as described in Section IV.I. Transportation, of this Draft EIR. Furthermore, in accordance with CVC Section 21806, drivers of police emergency vehicles have the ability to avoid traffic by using sirens and flashing lights to clear a path of travel or driving in the lanes of opposing traffic. Accordingly, Project operation would not cause a substantial increase in emergency response times due to traffic congestion.

Additionally, as specified above in the Regulatory Framework, in conformance with the California Constitution Article XIII, Section 35(a)(2) and the *City of Hayward v. Board of Trustees of California State University* ruling, the City is obligated to provide adequate public safety services, including police protection services, and the need for additional

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[15] *City of Los Angeles, Proposed Budget for the Fiscal Year 2020-21.*

[16] *Through public access would be maintained on the realigned portion of Bellwood Avenue regardless of whether it is a public or private street.*

public safety services is not an environmental impact that CEQA requires a project proponent to mitigate.[17]

Based on the above analysis, the Project would not result in a need to construct any new police facilities or modify any existing facilities. Therefore, Project operation would not necessitate the provision of new or physically altered government facilities, the construction of which would cause significant environmental impacts, in order to maintain LAPD's capability to serve the Project Site. Thus, impacts to police protection services would be less than significant.

(2) Mitigation Measures

Project-level impacts related to police protection would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to police protection were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

e. Cumulative Impacts

(1) Impact Analysis

Cumulative growth in the greater Project area through 2023 (the Project's anticipated buildout year) includes specific known development projects, as well as general ambient growth projected to occur. As identified in Section III, Environmental Setting, of this Draft EIR, there are six related projects located in the vicinity of the Project Site. The projected growth reflected by the related projects is a conservative assumption, as some of the related projects may not be built out by 2023, may never be built, or may be approved and built at reduced densities. Additionally, much of this growth is anticipated by the City and will be incorporated into the West Los Angeles Community Plan update, which the Department of City Planning is in the process of preparing. To provide a conservative forecast, the future baseline forecast assumes that Related Project Nos. 1 through 6 are fully built out by 2023, unless otherwise noted. All six related projects fall within the boundaries of the West Los Angeles Area and are served by the West Los Angeles Community Police Station.

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[17] *City of Hayward v. Board of Trustees of California State University (2015) 242 Cal, App. 4th 833, 843.*

(a) Construction

In general, impacts to LAPD services and facilities during the construction of each related project would be addressed as part of each related project's development review process conducted by the City. Should Project construction occur concurrently with that of nearby related projects, coordination among these multiple construction sites would be required and implemented through each development's construction management plan, as developed in consultation with LADOT, which would ensure that emergency access and traffic flow are maintained on adjacent rights-of-way. In addition, similar to the Project, each related project would be subject to the City's routine construction permitting process, which includes a review by the LAPD to ensure that sufficient security measures are implemented to reduce potential impacts to police protection services. Furthermore, given the short-term and intermittent nature of construction activities, construction-related traffic generated by the Project and the related projects would not significantly impact LAPD response times within the Project Site vicinity as drivers of police vehicles have the ability to avoid traffic, pursuant to CVC Section 21806.

(b) Operation

As shown in Table IV.H.2-3 on page IV.H.2-16, based on the City of Los Angeles VMT Calculator Documentation Guide, the residential component of related projects that fall within the boundaries of the West Los Angeles Area and that would be served by the West Los Angeles Community Police Station would generate approximately 2,589 residents,[18] plus the Project's net residential service population of 119 residents, for a total estimated service population increase of 2,708 residents in the West Los Angeles Area. When considering these estimates, the West Los Angeles Area's police service population would increase from 228,000 to 230,708 residents, which would in turn decrease the officer-to-resident ratio for the West Los Angeles Area from the current ratio of 1.14 officers per 1,000 residents to 1.13 officers per 1,000 residents. The additional population associated with related projects and general growth in the Project area would likewise have an effect on crime in the West Los Angeles Area, which could increase solely based on per capita crime rates. Accordingly, cumulative population growth could increase the demand for LAPD services in the West Los Angeles Area. However, as previously discussed, due to the Project Design Features that would be implemented as part of the Project and the Project's contribution to the General Fund, the Project is not anticipated to generate a demand for additional police protection services that would exceed the LAPD's capacity to serve the Project Site.

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[18] *Based on the City of Los Angeles VMT Calculator Documentation Guide, Table 1, May 2020, the generation rate 2.25 persons per unit for "Multi-Family Residential" land use is applied to the residential component of related projects.*

Table IV.H.2-3
Estimated Service Population from Related Projects within West Los Angeles Area

No.[a]	Project Name/Address	Land Use	Unit/Area[b]	Conversion Factor[c]	Service Population[c]
1	Westfield Century City NCP Project 10250 W. Santa Monica Blvd.	Condominiums	262 du	2.25/du	590
		Shopping Center	358,881 sf	2.0/ksf	718
2	Century City Center[d] 1950 S. Avenue of the Stars	Condominiums	483 du	2.25/du	1,087
3	Apartments 10306 W. Santa Monica Blvd.	Apartments	116 du	2.25/du	261
4	Century Plaza (Hyatt Regency Hotel) 2025 S. Avenue of the Stars	Condominiums	193 du	2.25/du	435
		Hotel	240 rm	0.5/rm	120
		Office	117,647 sf	4.0/ksf	471
		Retail	93,814 sf	2.0/ksf	188
		Spa/Fitness	16,800 sf	1.0/ksf	17
		Restaurant	15,463 sf	4.0/ksf	62
5	Apartments 10400 W. Santa Monica Blvd.	Apartments	96 du	2.25/du	216
6	Fox Studios Master Plan 2016 10201 W. Pico Boulevard	Creative Office	383,900 sf	4.0/ksf	1,536
		Specialty Space	327,400 sf	4.0/ksf	1,310
		Stage Space	33,200 sf	4.0/ksf	133
		Facility Support	331,100 sf	4.0/ksf	1,325
		Utility Support	23,700 sf	4.0/ksf	95
Related Projects Service Population					**8,564**
Project Net Police Service Population					**207**
Total Residential Service Population for Related Projects and Project					**8,771**
Related Projects Residential Service Population					**2,589**
Net Project Residential Service Population					**119**
Total Residential Service Population for Related Projects and Net Project					**2,708**

du = dwelling units

sf = square feet

rm = rooms

Numbers may not sum precisely due to rounding.

[a] *Map No. corresponds to Table III-1, List of Related Projects, and Figure III-1, in Section III, Environmental Setting, of this Draft EIR. Related projects based on data from Los Angeles Department of Transportation and Department of City Planning as of June 12, 2019 (release of the Project's Notice of Preparation).*

[b] *Based on guidance from the LAPD, the analysis focuses on the increased population associated with residential uses.*

Table IV.H.2-3 (Continued)
Estimated Service Population from Related Projects within West Los Angeles Area

No.[a]	Project Name/Address	Land Use	Unit/Area[b]	Conversion Factor[c]	Service Population[c]

[c] *For employees, the following LADOT VMT Calculator employee generation factors were used: Retail 2.0/ksf; Hotel 0.5/rm; Office 4.0/ksf; Health Club 1.0/ksf; and High-Turnover Sit-Down Restaurant 4.0/ksf. For residents, the generation rate of 2.25 persons per unit for "Multi-Family Residential" land use was used based on the City of Los Angeles VMT Calculator Documentation Guide, Table 1, May 2020.*

[d] *The related project information reflects an alternative residential project, which proposes the development of 483 dwelling units, that was entitled in April 2006.*

Source: Eyestone Environmental, 2021.

Additionally, similar to the Project, each related project would be subject to the City's routine permitting process, which includes a review by the LAPD to ensure that sufficient security measures are implemented to reduce potential impacts to police protection services. In accordance with the police protection-related goals, objectives, and policies set forth in the Framework Element, as listed in the Regulatory Framework above, the LAPD would also continue to monitor population growth and land development throughout the City and identify additional resource needs, including staffing, equipment, vehicles, and possibly station expansions or new station construction that may become necessary to achieve the desired level of service. Through the City's regular budgeting efforts, the LAPD's resource needs would be identified and monies allocated according to the priorities at the time.[19] In addition, it is anticipated that the related projects would also implement project design features similar to the Project, which would reduce cumulative impacts to police protection services. Furthermore, the Project, as well as the related projects, would generate revenues to the City's General Fund (in the form of property taxes, sales tax revenue, etc.) that could potentially be applied toward the provision of new facilities and related staffing, as deemed appropriate.

With regard to emergency response, the Project and related projects would introduce new uses in the Project area that would generate additional traffic. Any resulting traffic congestion would have the potential to increase emergency vehicle response times to the Project Site and surrounding properties due to travel time delays. As discussed above, the Project is not anticipated to substantially affect emergency response times in the West Los Angeles Area, and the Project would not contribute to a cumulative impact relative to emergency response times. Furthermore, the drivers of emergency vehicles have the ability to avoid traffic by using sirens to clear a path of travel or driving in the lanes of opposing traffic, pursuant to CVC Section 21806.

[19] *City of Los Angeles, Proposed Budget for the Fiscal Year 2020-21.*

Additionally, consistent with City of Hayward v. Board Trustees of California State University (2015) 242 Cal.App.4th 833 ruling and the requirements stated in the California Constitution Article XIII, Section 35(a)(2) in Subsection 2.a.(1)(b) above, the obligation to provide adequate police protection is the responsibility of the City. Through the City's regular budgeting efforts, LAPD's resource needs, including staffing, equipment, basic cars, other special apparatuses and possibly station expansions or new station construction, would be identified and allocated according to the priorities at the time. At this time, LAPD has not identified that it will be constructing a new station in the area impacted by this Project either because of this Project or this Project and other projects in the service area. If LAPD determines that new facilities are necessary at some point in the future, such facilities: (1) would occur where allowed under the designated land use; (2) would be located on parcels that are infill opportunities on lots that are between 0.5 and 1 acre in size; and (3) could qualify for a categorical exemption or Mitigated Negative Declaration under CEQA Guidelines Section 15301 or 15332 and would not be expected to result in significant impacts, and projects involving the construction or expansion of a police station would be addressed independently pursuant to CEQA. Further analysis, including a specific location, would be speculative and beyond the scope of this document.

Based on the above, the Project and related projects would not result in significant cumulative impacts associated with the provision of new or physically altered government facilities (i.e., police), need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain service. As such, the Project's contribution to cumulative impacts on police protection during construction and operation would not be cumulatively considerable, and cumulative impacts would be less than significant.

(2) Mitigation Measures

Cumulative impacts related to police protection services would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts related to police protection services were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

IV. Environmental Impact Analysis

I. Transportation

1. Introduction

This section of the Draft EIR analyzes the Project's potential transportation impacts. This section is based on the *Transportation Assessment for the Senior Residential Community at the Bellwood Project* (Transportation Study) prepared by Gibson Transportation Consulting, Inc., dated February 2021, and revised in April 2021 and included as Appendix H.1 of this Draft EIR. The base assumptions of the Transportation Study were outlined in a Memorandum of Understanding (MOU) dated March 2019, which was reviewed and approved by LADOT. A copy of the MOU is provided in Appendix H.1 of this Draft EIR. LADOT also reviewed and approved the Transportation Study prior to circulation of this Draft EIR. A copy of LADOT's Assessment Letter of the Transportation Study is included as Appendix H.2 of this Draft EIR.

California Senate Bill (SB) 743, which went into effect in January 2014, required the Governor's Office of Planning and Research (OPR) to change the way public agencies evaluate transportation impacts of projects under the California Environmental Quality Act (CEQA). Under SB 743, the focus of transportation analysis has shifted from vehicle delay, which is typically measured by traffic Level of Service (LOS), to Vehicle Miles Traveled (VMT) in order to better address the State's goals regarding the reduction of greenhouse gas (GHG) emissions. In accordance with SB 743, on July 30, 2019, the City of Los Angeles adopted the CEQA Transportation Analysis Update, which sets forth the revised thresholds of significance for evaluating transportation impacts as well as screening and evaluation criteria for determining impacts. The CEQA Transportation Analysis Update establishes VMT as the City's formal method of evaluating a project's transportation impacts. In conjunction with this update, LADOT adopted its Transportation Assessment Guidelines (TAG) dated July 2019 and subsequently updated the TAG in July 2020. The July 2020 TAG defines the methodology for analyzing a project's transportation impacts in accordance with SB 743. The scope of the analysis for the Transportation Study summarized herein was developed in consultation with LADOT and is consistent with the July 2020 TAG and CEQA requirements.

2. Environmental Setting

a. Regulatory Framework

(1) State

(a) CEQA Guidelines Section 15064.3

In accordance with SB 743, CEQA Guidelines Section 15064.3 establishes VMT as the most appropriate measure of transportation impacts. Section 15064.3 states that generally, land use projects within 0.5 mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease VMT in the project area compared to existing conditions should be presumed to have a less than significant transportation impact. A lead agency has discretion to choose the most appropriate methodology to evaluate VMT, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may also use models to estimate VMT, and may revise those estimates to reflect professional judgment based on substantial evidence. As discussed above, LADOT's July 2020 TAG includes the specific methodologies and guidelines to be used to evaluate the VMT impacts of a project. In addition, as discussed further below, LADOT developed City of Los Angeles VMT Calculator Version 1.3 (May 2020) (VMT Calculator) to estimate project-specific daily household VMT per capita and daily work VMT per employee for developments within City limits. The methodology in determining VMT based on the VMT Calculator is consistent with CEQA Guidelines Section 15064.3 and LADOT's TAG.

(b) Congestion Management Program

The Congestion Management Program (CMP) was established statewide in 1990 to implement Proposition 111, tying appropriation of new gas tax revenues to congestion reduction efforts. CMP is managed at the countywide level and primarily uses an LOS performance metric, which is inconsistent with more recent state efforts to transition to VMT-based performance metrics. California Government Code Section 65088.3 allows counties to opt out of CMP requirements without penalty, if a majority of local jurisdictions representing a majority of a county's population formally adopt resolutions requesting to opt out of the program.

On June 20, 2018, Los Angeles County Metropolitan Transportation Authority (Metro) initiated a process to gauge the interest of local jurisdictions in opting out of State CMP requirements. On July 30, 2019, the Los Angeles City Council passed a resolution to opt out of the CMP program, and on August 28, 2019, Metro announced that the thresholds had been reached and the County of Los Angeles had opted to be exempt from CMP. As such, the provisions of the CMP no longer apply to any of the 89 local jurisdictions in

Los Angeles County. Accordingly, CMP analysis is no longer included in City of Los Angeles environmental documents.

(2) Regional

(a) Southern California Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy

In April 2016, the Southern California Association of Governments (SCAG) adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The 2016–2040 RTP/SCS identifies mobility, accessibility, sustainability, and high quality of life as the principles most critical to the future of the region. Furthermore, it balances the region's future mobility and housing needs with economic, environmental and public health goals. As stated in the 2016–2040 RTP/SCS, Senate Bill 375 requires SCAG and other Metropolitan Planning Organizations (MPO) throughout the state to develop a Sustainable Communities Strategy to reduce per capita greenhouse gas emissions through integrated transportation, land use, housing and environmental planning.[1] Within the 2016–2040 RTP/SCS, the overarching strategy includes plans for High Quality Transit Areas (HQTA), Livable Corridors, and Neighborhood Mobility Areas as key features of a thoughtfully planned, maturing region in which people benefit from increased mobility, more active lifestyles, increased economic opportunity, and an overall higher quality of life. HQTAs are described as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours.[2] Local jurisdictions are encouraged to focus housing and employment growth within HQTAs.[3] The Project Site is located within an HQTA as designated by the 2016–2040 RTP/SCS.[4,5] Refer to Section IV.E, Land Use and Planning, of this Draft EIR, for a detailed discussion of the relevant provisions of the 2016–2040 RTP/SCS that apply to the Project.

On September 1, 2020, SCAG's Regional Council adopted an updated RTP/SCS known as the 2020–2045 RTP/SCS or Connect SoCal.[6] As with the 2016–2020 RTP/SCS,

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[1] *SCAG 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, adopted April 2016, p. 166.*

[2] *SCAG 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, adopted April 2016, p. 189.*

[3] *SCAG 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, p. 76.*

[4] *SCAG 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, p. 77, Exhibit 5.1: High Quality Transit Areas in the SCAG Region for 2040 Plan.*

[5] *Los Angeles County Metropolitan Transportation Authority (Metro). "High Quality Transit Areas—Southwest Quadrant."*

[6] *SCAG, News Release: SCAG Regional Council Formally Adopts Connect SoCal, September 3, 2020.*

the purpose of the 2020–2045 RTP/SCS is to meet the mobility needs of the six-county SCAG region over the subject planning period through a roadmap identifying sensible ways to expand transportation options, improve air quality and bolster Southern California's long-term economic viability.[7] The goals and policies of the 2020–2045 RTP/SCS are similar to, and consistent with, those of the 2016–2040 RTP/SCS. Hence, because the Project would be consistent with the 2016–2020 RTP/SCS as discussed later in this section, the Project would also be consistent with the 2020–2045 RTP/SCS.

(3) Local

(a) City of Los Angeles Mobility Plan 2035

As an update to the prior Transportation Element of the General Plan, the City Council initially adopted Mobility Plan 2035: An Element of the General Plan (Mobility Plan) in August 2015. The City Council readopted the Mobility Plan in January 2016 and again in September 2016 upon consideration of additional amendments.[8] The Mobility Plan incorporates "complete streets" principles and lays the policy foundation for how the City's residents interact with their streets. The Mobility Plan includes five main goals that define the City's high-level mobility priorities: (1) Safety First; (2) World Class Infrastructure; (3) Access for All Angelenos; (4) Collaboration, Communication, and Informed Choices; and (5) Clean Environments and Healthy Communities. Each of the goals contains objectives and policies to support the achievement of those goals. Refer to Section IV.E, Land Use and Planning, of this Draft EIR, for a discussion of the Project's consistency with Mobility Plan 2035.

Street classifications/standards are designated in Mobility Plan 2035 and detailed in *The City of Los Angeles Complete Streets Design Guide* (Great Streets for Los Angeles). The Mobility Plan's street standards seek to create a balance between traffic flow and other important street functions, including transit routes and stops, pedestrian environments, bicycle routes, building design, and site access. Roadways are defined as follows in the Mobility Plan:

- Freeways—High-volume, high-speed roadways with limited access provided by interchanges that carry regional traffic through and do not provide local access to adjacent land uses.
- Arterial Streets—Major streets that serve through traffic and provide access to major commercial activity centers. Arterials are divided into two categories:

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[7] *SCAG, News Release: SCAG Regional Council Formally Adopts Connect SoCal, September 3, 2020.*

[8] *Los Angeles Department of City Planning, Mobility Plan 2035: An Element of the General Plan, approved by City Planning Commission on June 23, 2016, and adopted by City Council on September 7, 2016.*

- Boulevards represent the widest streets that typically provide regional access to major destinations and include two categories:
  - Boulevard I provides up to four travel lanes in each direction with a target operating speed of 40 mph.
  - Boulevard II provides up to three travel lanes in each direction with a target operating speed of 35 mph.
- Avenues pass through both residential and commercial areas and include three categories:
  - Avenue I provide up to two travel lanes in each direction with a target operating speed of 35 mph.
  - Avenue II provide up to two travel lanes in each direction with a target operating speed of 30 mph.
  - Avenue III provide up to two travel lanes in each direction with a target operating speed of 25 mph.

- Collector Streets—Generally located in residential neighborhoods and provide access to and from arterial streets for local traffic and are not intended for cut-through traffic. Collector Streets provide one travel lane in each direction with a target operating speed of 25 mph.

- Local Streets—Intended to accommodate lower volumes of vehicle traffic and provide parking on both sides of the street. Local Streets provide one travel lane in each direction with a target operating speed of 15 to 20 mph. Local Streets can be:
  - Continuous local streets that connect to other streets at both ends; or
  - Non-Continuous local streets that lead to a dead-end.

The Mobility Plan also includes the Transit Enhanced Network, Pedestrian Enhanced Districts, and the Bicycle Enhanced Network. The Transit Enhanced Network is a network of streets prioritized for transit with the accompanying objective of ensuring 90 percent of households have access within 1 mile of the network by 2035. The Mobility Plan proposes to design and implement by 2035 Pedestrian Enhanced Districts within the City's diverse neighborhoods and regional centers around schools, parks, community and regional gathering destinations, and employment centers with a prioritization of census tracts designated as disadvantaged communities and the highest concentration of pedestrian fatalities and severe injuries. The Bicycle Enhanced Network is comprised of protected bicycle lanes and bicycle paths to provide bikeways for a variety of users with the

goal of providing a low-stress network and higher level of comfort than traditional striped bicycle lanes.

(b) West Los Angeles Transportation Improvement and Mitigation Specific Plan Area

The Project Site is located within the boundaries of the West Los Angeles Transportation Improvement and Mitigation Specific Plan (West LA TIMP), adopted March 8, 1997 and amended June 28, 2019. The West LA TIMP is the transportation Specific Plan for a broad area between the Hollywood Hills to the north, the City of Santa Monica boundary to the west, the City of Culver City boundary to the south, and the City of Beverly Hills boundary to the east. The West LA TIMP is intended to regulate the phased development of land uses, insofar as the transportation infrastructure can accommodate such uses, and promote the development of coordinated and comprehensive transportation plans and programs with other jurisdictions and public agencies. The West LA TIMP is intended to provide a mechanism to fund specific transportation improvements that would mitigate transportation impacts generated by new development. A Transportation Impact Assessment (TIA) process and fee has been established for new development. However, the West LA TIMP exempts eldercare facilities from the TIA fee.[9]

(c) Vision Zero

As described in *Vision Zero: Eliminating Traffic Deaths in Los Angeles by 2025* (City of Los Angeles, August 2015), Vision Zero is a traffic safety policy that promotes strategies to eliminate collisions that result in severe injury or death. Vision Zero has identified the High Injury Network, a network of streets identified based on collision data from the last five years, where strategic investments will have the biggest impact in reducing death and severe injury. In the vicinity of the Project Site, Santa Monica Boulevard west of Beverly Glen Boulevard has been identified as part of the High Injury Network.[10] The Project Site is not located along a High Injury Network corridor and no Project Site access is proposed along a High Injury Network corridor.

(d) Plan for Healthy Los Angeles

Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan (LADCP, March 2015) (Plan for a Healthy Los Angeles) introduces guidelines for the City to follow to enhance the City's position as a regional leader in health and equity, encourage healthy design and equitable access, and increase awareness of equity and

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[9] *City of Los Angeles Municipal Code, Section 19.19.D.1.j.*

[10] *LADOT Livable Streets, Maps, Neighborhoods, Networks, and Zones, High Injury Networks, https://ladotlivablestreets.org/overall-map/maps, accessed June 20, 2021.*

environmental issues. Plan for a Healthy Los Angeles includes policies directing several City departments to develop plans that promote active transportation and safety.

(e) Los Angeles Municipal Code

With regard to construction traffic, Section 41.40 of the Los Angeles Municipal Code (LAMC) limits construction activities to the hours from 7:00 A.M. to 9:00 P.M. on weekdays and from 8:00 A.M. to 6:00 P.M. on Saturdays and national holidays. No construction is permitted on Sundays.

The LAMC also sets forth parking requirements for certain land uses. The parking requirements for the Project are based on rates provided in LAMC Section 12.21.A4(d)(5) for eldercare facilities. Additionally, in accordance with LAMC Section 12.21.A4(u), the code parking requirement for senior independent living and assisted living uses may be reduced if certain criteria are met. Based on these code requirements, the Project is required to provide a minimum of 81 vehicular parking spaces with application of the allowable reductions for senior independent living and assisted living spaces. The Project would provide a minimum of 81 vehicular parking spaces in accordance with code requirements.

In addition, LAMC Section 12.21.A.16 details the bicycle parking requirements for new developments. The Project would provide a total of 24 short-term and 48 long-term spaces to satisfy the LAMC requirements for on-site bicycle parking supply.

(f) Citywide Design Guidelines

The Citywide Design Guidelines serve to implement the Framework Element's urban design principles and are intended to be used by City of Los Angeles Department of City Planning staff, developers, architects, engineers, and community members in evaluating project applications, along with relevant policies from the Framework Element and Community Plans. The Citywide Design Guidelines were updated in October 2019 and include guidelines pertaining to pedestrian-first design, which serves to reduce VMT. These guidelines include the following:

- Guideline 1: Promote a safe, comfortable, and accessible pedestrian experience for all.
- Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.
- Guideline 3: Design projects to actively engage with streets and public space and maintain human scale.

b. Existing Conditions

(1) Existing Street Systems

The Project's transportation analysis evaluated a Study Area that is approximately 1.5 miles (north-south) by approximately 1 mile (east-west) and is generally bounded by Santa Monica Boulevard to the north, Avenue of the Stars to the east, Pico Boulevard to the south, and Beverly Glen Boulevard to the west. The Study Area for the Project's transportation analysis was established in consultation with LADOT.

The existing street system in the Study Area consists of primary and secondary arterials, and collector and local streets which provide regional, sub-regional, and local access.

(a) Streets and Highways

Listed below are the primary streets and highways that provide regional and local access to the Project Site:

- Beverly Glen Boulevard—Beverly Glen Boulevard is a designated Avenue I that travels in the north-south direction and is located approximately 0.2 mile west of the Project Site. Four 11- to 12-foot-wide travel lanes, two lanes in each direction with left-turn lanes at intersections, are provided on Beverly Glen Boulevard within the Study Area. Unmetered on-street parking is generally available on both sides of the street within the Study Area.

- Century Park West—Century Park West is a designated Avenue II that travels in the north-south direction and is located approximately 0.15 mile east of the Project Site. Four 11- to 12-foot-wide travel lanes, two lanes in each direction with left-turn lanes at intersections, are provided on Century Park West within the Study Area. On-street parking is generally not available on this street within the Study Area.

- Avenue of the Stars—Avenue of the Stars is a designated Boulevard II that travels in the north-south direction and is located approximately 0.4 mile east of the Project Site. Six 11- to 12-foot-wide travel lanes, three lanes in each direction with left-turn lanes at intersections and a center median, are provided on Avenue of the Stars within the Study Area. On-street parking is generally not available on this street within the Study Area.

- Motor Avenue—Motor Avenue is a designated Collector Street that travels in the north-south direction and is located approximately 0.4 mile southeast of the Project Site. Two 12-foot-wide travel lanes, one lane in each direction with left-turn lanes at intersections and a center median, are provided on Motor

Avenue within the Study Area. Unmetered on-street parking is generally provided on both sides of the street within the Study Area.

- Bellwood Avenue—Bellwood Avenue is a designated Local Street that travels through the Project Site in the east-west direction and provides access to the existing Project Site driveways. Two 10-foot-wide travel lanes, one in each direction, are provided on Bellwood Avenue within the Study Area. Unmetered on-street parking with permit is available on both sides of the street within the Study Area.

- Santa Monica Boulevard—Santa Monica Boulevard is a designated Boulevard II that travels in the east-west direction and is located approximately 0.55 mile north of the Project Site. Santa Monica Boulevard within the Study Area is also identified as State Route 2. Six 11- to 12-foot-wide travel lanes, three lanes in each direction with left-turn lanes at intersections are provided on Santa Monica Boulevard with the Study Area. An auxiliary one-way travel lane runs adjacent to Santa Monica Boulevard. Metered on-street parking is generally available on both sides of the auxiliary lane within the Study Area. On-street parking is generally not available on Santa Monica Boulevard within the Study Area.

- Olympic Boulevard—Olympic Boulevard is a designated Boulevard II that travels in the east-west direction and is located approximately 350 feet north of the Project Site. Seven 10- to 11-foot-wide travel lanes, three eastbound lanes and four westbound lanes with left-turn lanes at intersections are provided on Olympic Boulevard within the Study Area. Unmetered on-street parking is generally available on the north side of the street with afternoon peak hour restrictions within the Study Area.

- Pico Boulevard—Pico Boulevard is a designated Avenue I that travels in the east-west direction and is located approximately 0.3 mile south of the Project Site. Six 11- to 12-foot-wide travel lanes, three lanes in each direction with left-turn lanes at intersection, are provided on Pico Boulevard. Unmetered on-street parking is generally provided on the north side of the street with afternoon peak hour restrictions, and on the south side of the street with morning and afternoon peak hour restrictions within the Study Area.

(b) Regional Transportation System

(i) Freeways

Primary regional access to the Study Area is provided by Interstate 405 (I-405) and Interstate 10 (I-10). I-405 generally runs in the northwest-southeast direction and is located approximately 1.5 miles west of the Project Site. Access to I-405 in the vicinity of the Project Site is provided via interchanges, which are located outside the Study Area at Wilshire Boulevard, Santa Monica Boulevard, Sawtelle Boulevard, and Sepulveda Boulevard. I-10 generally runs in the east-west direction and is located approximately

1.8 miles south of the Project Site. Access to I-10 in the vicinity of the Project Site is provided via interchanges at Overland Avenue and Manning Avenue, which are located outside of the Study Area.

(ii) Transit System

As shown in Figure IV.I-1 on page IV.I-11, public transit service within the Study Area is currently provided by Metro, Culver City Bus, Santa Monica Big Blue Bus, Antelope Valley Transit Authority, Santa Clarita Transit, and LADOT Commuter Express. Bus stops that serve the Project Site (within a 0.25-mile walking distance) are currently provided along Olympic Boulevard at Beverly Glen Boulevard, Kerwood Avenue, and Century Park West. In addition, the Project Site is located approximately 0.5 mile from the future Metro Purple Line rail station at Constellation Boulevard between Century Park East and Solar Way.

Table IV.I-1, on page IV.I-12, provides a summary of the transit lines operating in the Study Area for each of the service providers, the type of service (peak vs. off-peak, express vs. local), and frequency of service. Table 3 of the Transportation Study summarizes the total available capacity of the transit lines within a 0.25-mile walking distance of the Project Site during the morning and afternoon peak hours based on the frequency of service of each line, the standing capacity of each bus or train, and the average peak hour load in each direction. As shown in Table 3 of the Transportation Study, based on ridership data from March 2019 provided by Culver City Bus and Santa Monica Big Blue Bus, the transit lines within 0.25 mile of the Project Site (Culver City Bus Route 3 and Santa Monica Big Blue Bus Route 5) currently provide a combined capacity for approximately 660 additional riders during the morning peak hour and 636 riders during the afternoon peak hour.

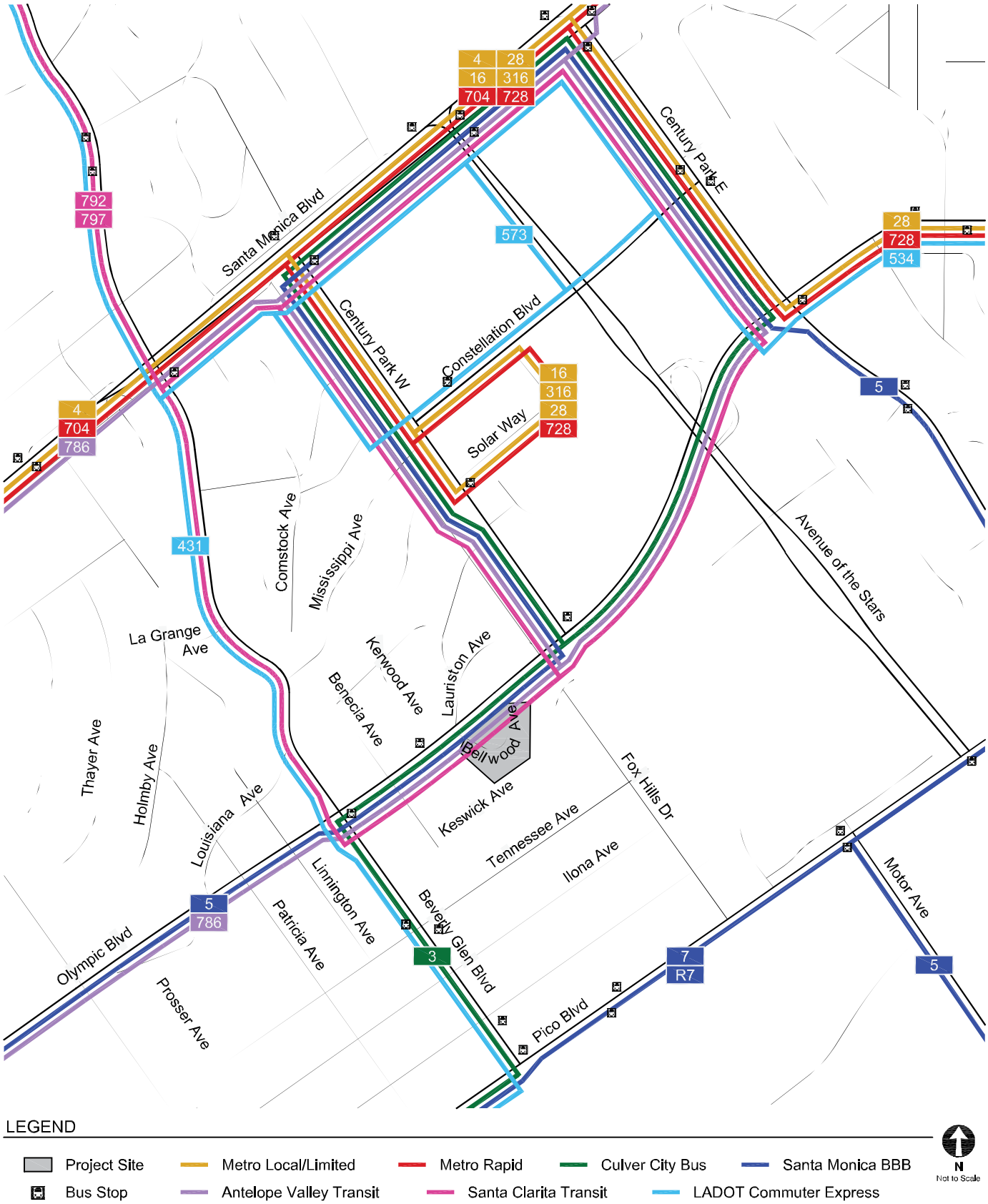
(2) Existing Parking and Site Access

The Project Site currently includes three multi-family residential developments with associated surface parking. Vehicular access to the multi-family residential buildings is provided via several driveways along Bellwood Avenue.

(3) Existing Bicycle and Pedestrian Facilities

(a) Bicycle Facilities

Based on *2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element,* (Los Angeles Department of City Planning, adopted March 1, 2011) (2010 Bicycle Plan), the existing bicycle system consists of a limited network of bicycle lanes (Class II) and bicycle routes (Class III). Class II bicycle lanes are a component of street design with dedicated striping, separating vehicular traffic from bicycle traffic. These facilities offer a safer environment for both cyclists and motorists. Class III



LEGEND

Project Site
Bus Stop
Metro Local/Limited
Antelope Valley Transit
Metro Rapid
Santa Clarita Transit
Culver City Bus
LADOT Commuter Express
Santa Monica BBB

N
Not to Scale

Figure IV.I-1
Existing Transit Service in the Study Area

Source: Gibson Transportation Consulting, Inc., 2020.

Table IV.I-1
Existing Transit Service

Provider, Route, and Service Area	Service Type	Hours of Operation	Average Headway (minutes)			
			A.M. Peak Period		P.M. Peak Period	
			NB/EB	SB/WB	NB/EB	SB/WB
Metro						
4 Downtown Los Angeles–Santa Monica via Santa Monica Blvd.	Local	24-Hour	13	13	11	13
16 Downtown Los Angeles–Century City via 3rd Street	Local	4:15 A.M.–1:30 A.M.	18	11	15	16
28 Downtown Los Angeles–Eagle Rock–Century City via Olympic Blvd. and Eagle Rock Blvd.	Local	6:30 A.M.–10:00 P.M.	8	8	8	9
316 Downtown Los Angeles–Century City via 3rd Street	Limited	6:15 A.M.–7:00 P.M.	9	11	11	10
704 Downtown Los Angeles–Santa Monica via Santa Monica Blvd.	Rapid	6:00 A.M.–12:00 A.M.	15	12	13	13
728 Downtown Los Angeles–Century City via West Olympic Blvd.	Rapid	5:00 A.M.–9:00 P.M.	13	13	15	14
Culver CityBus (CC)						
3 Crosstown Culver City	Local	5:30 A.M.–11:30 P.M.	16	14	16	16
Santa Monica Big Blue Bus (BBB)						
5 Santa Monica–Century City–Palms Station Expo Line	Local	6:00 A.M.–9:30 P.M.	27	27	24	22
7 Downtown Santa Monica–Rimpau Transit Center	Local	5:00 A.M.–12:30 A.M.	15	15	15	15
R7 Downtown Santa Monica–Koreatown	Rapid	5:30 A.M.–11:15 P.M.	10	10	10	10
Antelope Valley Transit Authority (AVTA)						
786 Lancaster/Palmdale–Century City/West Los Angeles	Express	4:00 A.M.–7:30 P.M.	N/A	20	24	N/A
Santa Clarita Transit (SC)						
792 Santa Clarita–Century City–UCLA–Westwood	Express	7:00 A.M.–6:30 P.M.	30	N/A	N/A	30
797 Santa Clarita–Century City–UCLA–Westwood	Express	5:15 A.M.–9:00 P.M.	N/A	20	30	N/A
LADOT Commuter Express (CE)						
431 Westwood–Palms–Downtown Los Angeles	Express	6:30 A.M.–7:30 P.M.	30	N/A	N/A	30
534 Westwood–Century City–West Los Angeles–Downtown Los Angeles	Express	7:00 A.M.–6:30 P.M.	23	N/A	N/A	23
573 Westwood–Encino–Mission Hills–Century City	Express	5:30 A.M.–8:00 P.M.	[a]	9	9	[a]

LADOT = Los Angeles Department of Transportation

Table IV.I-1 (Continued)
Existing Transit Service

Provider, Route, and Service Area	Service Type	Hours of Operation	Average Headway (minutes)			
			A.M. Peak Period		P.M. Peak Period	
			NB/EB	SB/WB	NB/EB	SB/WB

Metro = Los Angeles County Metropolitan Transportation Authority
A.M. Peak from 6 A.M.–10 A.M.
P.M. Peak from 3 P.M.–7 P.M.
[a] *LADOT CE 573 provides one stop in the northbound direction during the A.M. peak period and southbound direction during the P.M. peak period.*
Source: Gibson Transportation Consulting, Inc., 2020.

bicycle routes and bicycle-friendly streets are those where motorists and cyclists share the roadway and there is no separated striping for bicycle travel. Bicycle routes and bicycle-friendly streets are preferably placed on collector and low volume arterial streets. Bicycle routes with shared lane markings, or "sharrows," remind bicyclists to ride farther from parked cars to prevent collisions, increase awareness of motorists that bicycles may be in the travel lane, and show bicyclists the correct direction of travel.

The components of the 2010 Bicycle Plan have been incorporated into the bicycle network of the Mobility Plan. The Mobility Plan includes a Bicycle Enhanced Network (Low-Stress Network) (BEN) and a Bicycle Lane Network (BLN). The BEN is a subset of and supplement to the 2010 Bicycle Plan and is comprised of a network of streets that prioritize bicyclists and provide bicycle paths and protected bicycle lanes (Class IV). The BLN consists of Class II bicycle lanes with striped separation from motorized vehicle traffic. Within the immediate vicinity of the Project Site, Class II bicycle lanes are provided along Motor Avenue and Santa Monica Boulevard west of Avenue of the Stars.

(b) Pedestrian Facilities

The area surrounding the Project Site includes a network of pedestrian facilities, including sidewalks, crosswalks, and pedestrian safety features. Currently along the Project frontage, sidewalks along both sides of Bellwood Avenue serving as routes to the Project Site provide connectivity, connecting to pedestrian crossings at intersections within the Study Area. The nearby signalized study intersections provide pedestrian facilities, including curb ramps on all approaches, pedestrian phasing, high-visibility crosswalk striping, and Americans with Disabilities Act (ADA) accessible curb ramps. In addition, the signalized intersection of Century Park West & Olympic Boulevard provides pedestrian facilities including marked pedestrian crossings on all approaches, pedestrian phasing, and ADA accessible ramps. .

c. Future Conditions

(1) Related Projects

The transportation analysis for the Project considered the effects of other development proposals (related projects) either proposed, approved, or under construction in the Study Area. The list of related projects in the vicinity of the Project Site that could affect traffic conditions in the Study Area is based on information on file at the City of Los Angeles Department of City Planning and LADOT. A total of six related projects were identified in the vicinity of the Project Site, as summarized in Table III-1 in Section III, Environmental Setting, of this Draft EIR.

(2) Future Improvements

(a) 2010 Bicycle Plan

Within the Study Area, the 2010 Bicycle Plan proposes dedicated bicycle lanes on Avenue of the Stars, Pico Boulevard, and Beverly Glen Boulevard north of Santa Monica Boulevard. No bicycle routes/bicycle friendly streets are proposed within the Study Area. There is no schedule of implementation for these improvements, therefore, no changes to vehicular lane configurations as a result of potential new bicycle lanes were assumed in the transportation analysis.

(b) Mobility Plan

In the Mobility Plan, the City identifies key corridors as components of various "mobility-enhanced networks." Each network is intended to focus on improving a particular aspect of urban mobility, including transit, neighborhood connectivity, bicycles, pedestrians, and vehicles. The specific improvements that may be implemented in those networks have not yet been identified and there is no schedule for implementation; therefore, no changes to vehicular lane configurations within the Transportation Study were made as a result of the Mobility Plan. However, as set forth in the Transportation Study, the Study Area does include the following mobility-enhanced networks:

- Transit Enhanced Network (TEN): The TEN aims to improve existing and future bus services through reliable and frequent transit service in order to increase transit ridership, reduce single-occupancy vehicle trips, and integrate transit infrastructure investments within the surrounding street system. Pico Boulevard and Santa Monica Boulevard within the Study Area have been designated as part of the TEN.

- Neighborhood Enhanced Network (NEN): The NEN reflects the synthesis of the bicycle and pedestrian networks and serves as a system of local streets that are slow moving and safe enough to connect neighborhoods through active transportation. The NEN designates Tennessee Avenue within the Study Area as part of the network.

- Bicycle Enhanced Network (BEN): Santa Monica Boulevard west of Century Park East within the Study Area has been identified as part of the BEN.

- Bicycle Lane Network (BLN): Avenue of the Stars, Pico Boulevard, and Beverly Glen Boulevard north of Santa Monica Boulevard within the Study Area have been identified as part of the BLN.

- Pedestrian Enhanced District (PED): The Mobility Plan aims to promote walking to reduce the reliance on automobile travel by providing more attractive and pedestrian-friendly sidewalks, as well as adding pedestrian signalizations, street

trees, and pedestrian-oriented design features. Beverly Glen Boulevard north of La Grange Avenue and between Louisiana Avenue and Ilona Avenue, Olympic Boulevard west of Benecia Avenue and east of Bellwood Avenue, Century Park West, Avenue of the Stars, Constellation Boulevard, and Santa Monica Boulevard within the Study Area are designated as part of the PED.

3. Project Impacts

a. Thresholds of Significance

In accordance with the State CEQA Guidelines Appendix G, the Project would have a significant impact related to transportation/traffic if it would:

Threshold (a): Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

Threshold (b): Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);

Threshold (c): Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or

Threshold (d): Result in inadequate emergency access.

For this analysis, the Appendix G Thresholds provided above are relied upon. The methodology and base assumptions used in this analysis were established by LADOT.

b. Methodology

(1) Consistency with Plans, Programs, Ordinances, or Policies

As described above, CEQA Guidelines threshold (a) has been updated to require an analysis of the Project's potential to conflict with plans, programs, ordinances, or policies that address the circulation system including transit, roadway, bicycle and pedestrian facilities. Therefore, the impact analysis below evaluates the Project's potential to conflict with the plans, programs, ordinances, and policies listed above in the Regulatory Framework section of this chapter. The content of this analysis is informed by the guidance provided in LADOT's TAG. In accordance with the TAG, a project that generally conforms with, and does not obstruct the City's development policies and standards will be considered to be consistent.

(2) Vehicle Miles Traveled

As discussed above, the City of Los Angeles adopted the CEQA Transportation Analysis Update, which sets forth the revised thresholds of significance for evaluating transportation impacts as well as screening and evaluation criteria for determining impacts. In accordance with SB 743 and CEQA Guidelines Section 15064.3, the CEQA Transportation Analysis Update establishes VMT as the City's formal method of evaluating a project's transportation impacts. Thus, for CEQA purposes, the Project's Transportation Study addresses VMT under the new thresholds. For informational purposes only, and not for determining the potential impacts of the Project under CEQA, the Transportation Study also includes an analysis that is based on the adopted guidelines, methodologies, and thresholds that were in effect at the time the MOU was approved (level of service or LOS).

LADOT's TAG define the methodology of analyzing a project's transportation impacts using VMT. Threshold T-2.1 of LADOT's TAG provides the following series of screening criteria to determine if a development project would require further VMT evaluation. If a project requires a discretionary action and does not satisfy either T-2.1-1 or T-2.1-2, as detailed below, a "No Impact" determination can be made:

- T-2.1-1: Would the land use project generate a net increase of 250 or more daily vehicle trips?
- T-2.1-2: Would the project generate a net increase in daily VMT?

As summarized in Table IV.I-2 on page IV.I-29 in the analysis below, the Project would generate a net reduction in daily trips and, therefore, generate a net reduction in daily VMT. Thus, the Project would not require further VMT evaluation under the City's adopted VMT thresholds (T-2.1-1 or T-2.1-2) and a "No Impact" determination can be made.

(3) Hazardous Geometric Design Features

The TAG include a methodology for analyzing impacts with respect to hazardous geometric design features. For vehicle, bicycle and pedestrian safety impacts, project access points, internal circulation, and parking access from an operational and safety perspective (for example, turning radii, driveway queuing, line of sight for turns into and out of project driveway[s]) are reviewed. Where project driveways would cross pedestrian facilities or bicycle facilities (bike lanes or bike paths), operational and safety issues related to the potential for vehicle/pedestrian and vehicle/bicycle conflicts and the severity of consequences that could result are considered. In areas with moderate to high levels of pedestrian or bicycle activity, the collection of pedestrian or bicycle count data may be required. Using this methodology, the Project design, including proposed infrastructure

improvements, land uses, and open spaces, are reviewed to determine if the Project would increase and/or create a hazardous geometric design feature(s) and/or incompatible use.

(4) Emergency Access

The analysis of the Project's potential access impacts includes a review of the proposed vehicular access points and internal circulation. A determination was made regarding the potential for these features of the Project to impede traffic flows on adjacent City streets and/or result in potential safety impacts.

c. Project Design Features

TR-PDF-1: A detailed Construction Management Plan, including street closure information, a detour plan, haul routes, and a staging plan, will be prepared and submitted to the City for review and approval, prior to the issuance of a demolition permit or building permit. The Construction Management Plan will be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and will include, but not be limited to, the following elements, as appropriate:

- Advance notification of adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation.
- Prohibition of construction worker or equipment parking on adjacent streets.
- Temporary traffic control during construction activities adjacent to public rights-of-way to improve traffic flow on public roadways (e.g., flag men), as appropriate.
- Containment of Project construction activity associated with the new building and on-site improvements within the Project Site boundaries.
- Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate.
- Scheduling of construction-related deliveries, haul trips, etc., to occur outside commuter peak hours to the extent feasible. (Commuter peak hours are 7:00 A.M. to 9:00 A.M. and 3:00 P.M. to 6:00 P.M.).
- Spacing of trucks so as to discourage a convoy effect (e.g., vehicles traveling together as a group).

- Identification of a construction manager and provision of a telephone number for any inquiries or complaints from residents regarding construction activities. The telephone number shall be posted at the site readily visible to any interested party during site preparation, grading, and construction.
- Traffic management personnel would be trained to assist in emergency response by restricting or controlling the movement of traffic that could interfere with emergency vehicle access.

d. Analysis of Project Impacts

Threshold (a): Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

(1) Impact Analysis

LADOT's TAG provides screening questions to determine which plans, policies, ordinances and programs addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities, are relevant to a project. As set forth in the Transportation Study, based on those questions, the following apply to the Project: the Mobility Plan; Vision Zero; Citywide Design Guidelines; Plan for a Healthy Los Angeles; and the LAMC.

(a) Mobility Plan 2035

(i) Mobility Plan Policies

Policy 1.1 Roadway User Vulnerability—Design, plan, and operate streets to prioritize the safety of the most vulnerable roadway user: Access to the Project Site would be provided via one full-access driveway on Bellwood Avenue, and a separate service driveway would provide access to the loading area adjacent to the parking entry/exit driveway. Additionally, the portion of Bellwood Avenue that currently bisects the Project Site would be vacated and realigned,[11] with through public access maintained from both sides of Bellwood Avenue. Separate pedestrian access from Bellwood Avenue would be provided primarily via the building's lobby entrance along the realigned portion of Bellwood Avenue, with two additional pedestrian access points for residents and employees near the bistro terrace and near the memory care lobby. Bicyclists would have the same access

[11] *The reconfigured Bellwood Avenue is currently proposed to become a private street; however, in the event Bellwood Avenue remains a public street, the Project would still implement the proposed vacation and realignment and through public access would also be maintained.*

opportunities as pedestrians. Therefore, the Project would not conflict with Mobility Plan Policy 1.1.

Policy 1.6 Multi-Modal Detour Facilities—Design detour facilities to provide safe passage for all modes of travel: Construction activities associated with the new building and on-site improvements would be maintained on-site. Any temporary impediments to the public right-of-way would be addressed with implementation of the Construction Management Plan (Project Design Feature TR-PDF-1). Therefore, the Project would not conflict with Mobility Plan Policy 1.6.

Policy 2.2 Complete Streets Design Guide—Establish the Complete Streets Design Guide as the City's document to guide the operations and design of streets and other public rights-of-way: As part of the Project, Bellwood Avenue would be improved with consideration of the safety of all users, including pedestrians, bicyclists, and vehicles. Specifically, the realigned portion of Bellwood Avenue would be developed in accordance with City requirements and would include an entry motor court for pick-up and drop-off of eldercare facility residents. Additionally, the primary access driveway to the below-grade parking would be located further to the north so as to reduce conflict with drop-off activities. The Project would also provide parking in subterranean structures rather than rely, in part, on street parking on Bellwood Avenue, which would increase pedestrian safety as it decreases interface between vehicles and pedestrians. Furthermore, the Project would provide enhanced sidewalks and street improvements (including new street trees any required lighting) along portions of the Project Site's Bellwood Avenue frontage. Therefore, the Project would not conflict with Mobility Plan Policy 2.2.

Policy 2.3 Pedestrian Infrastructure—Recognize walking as a component of every trip, and ensure high quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment: The Project would support and would not preclude the implementation of this citywide policy. The realignment of Bellwood Avenue would maintain pedestrian access on both sides of Bellwood Avenue. Streetscape amenities, such as new street trees on Bellwood Avenue and lighting fixtures in accordance with Bureau of Street Lighting standards and other elements would enhance the pedestrian experience. In addition, the Project would provide improvements to the sidewalks with wider widths along portions of Bellwood Avenue adjacent to the Project Site. The Project would also include a bistro terrace and lobby, providing an active ground floor with pedestrian friendly improvements. Therefore, the Project would not conflict with Mobility Plan Policy 2.3.

Policy 2.4 Neighborhood Enhanced Network—Provide a slow speed network of locally serving streets: No access to the Project Site is provided along street segments identified in the Neighborhood Enhanced Network and Project traffic would not interfere with the neighborhood character of the surrounding area. In addition, as part of the Project,

the portion of Bellwood Avenue that travels through the Project Site would be vacated and realigned. Through public vehicular and pedestrian access would be maintained from both sides of Bellwood Avenue, and a vehicle turn-out adjacent to the building's lobby entrance would be provided along with sidewalk and streetscape improvements. Thus, Bellwood Avenue would continue to serve as a slow speed local street (i.e., 15 to 20 miles per hour). Therefore, the Project would not conflict with Mobility Plan Policy 2.4.

Policy 2.5 Transit Network—Improve the performance and reliability of existing and future bus service: The Project would support and would not conflict with the implementation of this citywide policy. As detailed in the Transportation Study included in Appendix H of this Draft EIR, the Project would result in a net reduction of trips. As such, the Project demand for transit service would not exceed the regional transit system capacity described in Table 3 of the Transportation Study. Accordingly, it is concluded that the Project would not cause the capacity of the transit system to be substantially exceeded and the Project would not conflict with Mobility Plan Policy 2.5.

Policy 2.6 Bicycle Networks—Provide safe, convenient, and comfortable local and regional bicycling facilities *for people of all types and abilities*: The Project would support and would not conflict with the implementation of this citywide policy. The Project Site is not located adjacent to any roadways designated within the Bicycle Lane Network. In addition, Project visitors, and employees arriving by bicycle would have the same access opportunities as pedestrian visitors, with access to the Project Site via improved sidewalks along the realigned Bellwood Avenue, as well as internal pathways with access to the central courtyards and lobby entrances. In addition, the Project would provide 72 bicycle parking spaces (24 short term spaces readily available on the ground floor along Bellwood Avenue and 48 long term spaces located on the P2 parking level). Therefore, the Project would not conflict with Mobility Plan Policy 2.6.

Policy 2.7 Vehicle Network—Provide vehicular access to the regional freeway system: This is a citywide policy that does not apply to the Project because no changes to regional access are proposed as part of the Project. Primary regional access would continue to be provided via Olympic Boulevard to Santa Monica Boulevard (State Route 2), the Santa Monica Freeway (I-10), and the San Diego Freeway (I-405), which are all accessible within 2 miles of the Project Site. Therefore, the Project would not conflict with or preclude the implementation of Mobility Plan Policy 2.7.

Policy 2.10 Loading Areas—Facilitate the provision of adequate on and off-street loading areas: An entry motor court/vehicle turn-out area would be provided along Bellwood Avenue adjacent to the Project Site and would be located adjacent to the lobby area. Access to the subterranean parking would occur from one entry/exit driveway located along Bellwood Avenue near the northern boundary of the building. A separate service driveway, providing access to the loading area, would be located on Bellwood

Avenue adjacent to the parking entry/exit driveway. Therefore, the Project would not conflict with Mobility Plan Policy 2.10.

Policy 3.1 Access for All—Recognize all modes of travel, including pedestrian, bicycle, transit, and vehicular modes—including goods movement—as integral components of the City's transportation system: The Project encourages multi-modal transportation alternatives and access for all travel modes to and from the Project Site. The Project provides an entry motor court/vehicle turn-out area adjacent to the Project lobby entrance along the realigned portion of Bellwood Avenue. Furthermore, the Project provides infrastructure such as enhanced sidewalks and bicycle parking to encourage walking and bicycling. Therefore, the Project would not conflict with Mobility Plan Policy 3.1.

Policy 3.2 People with Disabilities—Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way: The Project's vehicular and pedestrian entrances would be designed in consideration of LADOT standards and would comply with American with Disabilities Act (ADA) requirements and would provide direct connections to pedestrian amenities at adjacent intersections. Therefore, the Project would not conflict with Mobility Plan Policy 3.2.

Policy 3.5 Multi-Modal Features—Support "first-mile, last-mile solutions" such as multi-modal transportation services, organizations, and activities in the areas around transit stations and major bus stops (transit stops) to maximize multi-modal connectivity and access for transit riders: The Project would provide enhanced sidewalks and bicycle parking amenities to promote multi-modal connectivity. Therefore, the Project would not conflict with Mobility Plan Policy 3.5.

Policy 3.8 Bicycle Parking—Provide bicyclists with convenient, secure, and well-maintained bicycle parking facilities: The Project would provide short-term (24 spaces) at the ground floor along Bellwood Avenue and long-term (48 spaces) bicycle parking within Level P2, in conformance with the LAMC.. Furthermore, as discussed in Section IV.H.2, Public Services—Police Protection, of this Draft EIR, the Project would include numerous operational design features to enhance safety within and immediately surrounding the Project Site, including private on-site security, a closed circuit security camera system, and keycard entry for the building and the parking areas (pursuant to Project Design Feature POL-PDF-2). Therefore, the Project would not conflict with Mobility Plan Policy 3.8.

Policy 4.5 Improved Communication—Facilitate communications between citizens and the City in reporting on and receiving responses to non-emergency street improvements: As part of the Project's Construction Management Plan, advance notification to the adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of construction, would be provided. Therefore, the Project would not conflict with Mobility Plan Policy 4.5.

Policy 4.8 Transportation Demand Management Strategies—Encourage greater utilization of Transportation Demand Management (TDM) strategies to reduce dependence on single-occupancy vehicles: The Project would promote and provide employees, residents, and visitors with opportunities to utilize alternative transportation modes. Specifically, the Project would provide shuttle service for the eldercare residents, sidewalk and street improvements along the Project Site's Bellwood Avenue frontage, and on-site pedestrian paths. The Project would also provide bike parking facilities, including 72 bike parking spaces per LAMC requirements.. Therefore, the Project would not conflict with Mobility Plan Policy 4.8.

Policy 4.13 Parking and Land Use Management—Balance on-street and off-street parking supply with other transportation and land use objectives: The Project would provide sufficient off-street parking to accommodate the Project in compliance with LAMC requirements. Therefore, the Project would not conflict with Mobility Plan Policy 4.13.

Policy 4.14 Wayfinding—Provide widespread, user-friendly information about mobility options and local destinations, delivered through a variety of channels including traditional signage and digital platforms: The Project would incorporate illumination for parking signage, and security purposes. Therefore, the Project would not conflict with Mobility Plan Policy 4.14.

Policy 5.1 Sustainable Transportation—Encourage the development of a sustainable transportation system that promotes environmental and public health: The Project would provide bicycle and pedestrian facilities and connections throughout the Project Site. Specifically, the Project would provide: (1) bicycle parking spaces meeting LAMC requirements that would serve to promote use of bicycles; (2) enhanced sidewalks with new street trees and other improvements along the Project Site's Bellwood Avenue frontage; and (3) a pedestrian pathway around the westerly, southerly and easterly setbacks of the Project providing connectivity to the ground-level on-site courtyard and other ground-level open spaces for Project residents. In addition, the Project would provide charging facilities for electric vehicles. Therefore, the Project would not conflict with Mobility Plan Policy 5.1.

Policy 5.2 Vehicle Miles Traveled (VMT)—Support ways to reduce vehicle miles traveled (VMT) per capita: The Project would provide residents, employees, and visitors the opportunity to utilize alternative transportation modes to reduce VMT by reducing the number of single occupancy vehicle trips to the Project Site and encouraging walking and non-automotive forms of transportation. As discussed above, the Project would provide shuttle service for the eldercare residents, sidewalk and street improvements along the Project Site's Bellwood Avenue frontage, on-site pedestrian paths, and bike parking facilities (including 72 bike parking spaces per LAMC requirements). Therefore, the Project would not conflict with Mobility Plan Policy 5.2.

Policy 5.4 Clean Fuels and Vehicles—Continue to encourage the adoption of alternative fuels, new mobility technologies, and supporting infrastructure: The Project would comply with City requirements for providing electric vehicle charging capabilities and electric vehicle charging stations within the proposed parking area, thus incorporating design features to provide residents, employees, and visitors the opportunity to utilize alternative fuels and new mobility technologies. Therefore, the Project would not conflict with Mobility Plan Policy 5.4

(ii) Transit Enhanced Network, Pedestrian Enhanced Districts, and Bicycle Enhanced Network

As discussed in the policy analysis above, i the Project would not conflict with Mobility Plan policies related to the Transit Enhanced Network, Pedestrian Enhanced District, and Bicycle Network. The Project would not result in an increased demand for public transit when compared with existing conditions. In addition, the Project would provide a direct and safe path of travel with minimal obstructions to pedestrian movement within and adjacent to the Project Site. The Project would improve adjacent sidewalks along the realigned portion of Bellwood Avenue on both sides of the street to create a walkable and attractive pedestrian environment. In addition, paved walkways would be provided internal to the Project Site with access to and from Bellwood Avenue. Project access locations would also be required to conform to City standards and would be designed to provide adequate sight distance, and/or pedestrian movement controls that would meet the City's requirements to protect pedestrian safety. In addition, bicycle access would also continue to be provided by Bellwood Avenue and the Project would provide 72 bicycle parking spaces, including 24 readily accessible bicycle parking spaces along Bellwood Avenue. Furthermore, the Project does not propose modifying, removing, or otherwise affecting existing bicycle infrastructure, and the Project driveway is not proposed along a street with an existing bicycle facility. Therefore, the Project would not conflict with Mobility Plan policies related to the Transit Enhanced Network, Pedestrian Enhanced Districts, and the Bicycle Enhanced Network.

(iii) Mobility Plan Programs PL.1 and PK.10

Mobility Plan Program PL.1 requires driveway access to buildings from non-arterial streets or alleys (where feasible) in order to minimize interference with pedestrian access and vehicular movement. Vehicular access to the Project Site would be provided via Bellwood Avenue, which is a non-arterial street. Therefore, the Project would not conflict with Mobility Plan Program PL.1.

Mobility Plan Program PK.10 directs the City to establish an incentive program to encourage projects to retrofit parking lots, structures, and driveways to include pedestrian design features. While this is a citywide program, the Project would not conflict with its implementation. Specifically, as discussed above, the Project would include streetscape

improvements along Bellwood Avenue that would promote walking. In addition, the design and implementation of driveways would comply with the City's applicable requirements, including emergency access requirements set forth by the LAFD. The Project design would also be reviewed by the Los Angeles Department of Building and Safety and the LAFD during the City's plan check review process to ensure all applicable requirements are met. Therefore, the Project would not conflict with Mobility Plan Program PK.10.

(b) Vision Zero

Vision Zero implements projects that are designed to increase safety on the most vulnerable City streets. The segment of Olympic Boulevard in the vicinity of the Project has not been identified in the High Injury Network and the Project is not located along a High Injury Network corridor. Nonetheless, the Project improvements to the pedestrian environment, including widened and enhanced sidewalks along the Project's frontages, would not preclude future Vision Zero safety improvements by the City. In addition, pedestrian and vehicular access within the Project Site would conform with City requirements. Therefore, the Project would not conflict with Vision Zero.

(c) Citywide Design Guidelines

As discussed above, the Citywide Design Guidelines include promoting a safe, comfortable, and accessible pedestrian experience for all; carefully incorporating vehicular access such that it does not degrade the pedestrian experience; and designing projects to actively engage with streets and public space and maintain human scale. The Project would support these guidelines as the design includes accessible sidewalks, pedestrian amenities, and a well-designed vehicular access driveway in accordance with the City's design considerations. Specifically, the Project would prioritize pedestrian access by providing sidewalks with new streetscape improvements along both sides of Bellwood Avenue. For example, the Project would provide street trees uniformly within the sidewalk to provide adequate shade to enhance the pedestrian experience. The Project would improve adjacent sidewalks along Bellwood Avenue on both sides of the street to create a walkable and attractive pedestrian environment. The Project would provide improvements to the sidewalks with wider widths along portions of Bellwood Avenue and would also include a bistro terrace and lobby, providing an active ground floor with pedestrian friendly improvements. In addition, bicycle access would also continue to be provided by Bellwood Avenue and the Project would provide readily accessible bicycle parking spaces along Bellwood Avenue. Vehicular access into the proposed subterranean parking garage would be provided via one full-access driveway on Bellwood Avenue near the northern boundary of the Project Site. The driveway would be designed in accordance with LADOT standards and would minimize queuing on the adjacent street system. An entry motor court/vehicle turn-out area would be provided along Bellwood Avenue adjacent to the Project Site within the realigned portion of the roadway and would be located adjacent to the lobby area to accommodate pick-up and drop-off of Project residents, who may have mobility challenges

and/or need assistance. A separate service driveway, providing access to the loading area, would be located on Bellwood Avenue east of the parking garage, Therefore, the Project would be designed to minimize pedestrian/vehicular interaction. Overall, the Project would improve access and circulation along Bellwood Avenue by reducing the number of individual driveways and consolidating all non-service related access to one driveway. The Project would also maintain continuity of the sidewalk by limiting driveway curb cuts to the eastern portion of the Project Site. Therefore, the Project would not conflict with the Citywide Design Guidelines regarding pedestrian design.

(d) Other Programs, Plans, Ordinances, and Policies

The Project would not conflict with the Plan for a Healthy Los Angeles. Specifically, the Project would support the Plan for a Healthy Los Angeles by locating housing in an infill area near transit, as well as enhancing the pedestrian environment, providing bicycle parking, complying with ADA requirements, and providing direct connections to uses along Olympic Boulevard. As discussed in detail in Section IV.E, Land Use and Appendix E, Land Use Tables, of this Draft EIR, the Project would not conflict with the West Los Angeles Community Plan policies related to encouraging pedestrian activity and reducing single occupancy vehicle trips. The Project would provide direct and safe access for pedestrians and bicyclists with the enhanced sidewalks, and separate drop-off areas and bicycle facilities to promote the reduction in single occupancy vehicle trips. In addition, construction activities associated with the Project would occur in accordance with LAMC Section 41.40, which limits construction activities to the hours from 7:00 A.M. to 9:00 P.M. on weekdays and from 8:00 A.M. to 6:00 P.M. on Saturdays and national holidays. Furthermore, as described in more detail below, in accordance with LADOT guidance, a Construction Management Plan would be implemented for the Project (per Project Design Feature TR-PDF-1). Additionally, as discussed above, the Project would provide a minimum of 81 vehicular parking spaces and would thus satisfy LAMC parking requirements. Also, the Project would provide a total of 24 short-term and 48 long-term spaces to satisfy LAMC 12.21.A.16 for on-site bicycle parking supply. The Project would also comply with all applicable LADOT design standards. As an eldercare facility, the Project would not be subject to the West Los Angeles Transportation Improvement and Mitigation Specific Plan requirements, including payment of TIA fees. Therefore, the Project would not conflict with these programs, plans, ordinances, and policies.

Based on the above, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Impacts would be less than significant.

(2) Mitigation Measures

Project-level impacts related to the consistency with adopted City plans, programs, ordinances and policies regarding the circulation system would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to the consistency with adopted City plans, programs, ordinances, and policies regarding the circulation system were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (b): Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

(1) Impact Analysis

As discussed above, Section 15064.3 of the CEQA Guidelines describes specific considerations for evaluating a project's transportation impacts. As set forth therein, for land use projects, vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within 0.5 mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact.[12] Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.[13]

As previously discussed above in the Methodology Subsection, LADOT's TAG defines the methodology of analyzing a project's transportation impacts using VMT. Threshold T-2.1 of LADOT's TAG provides the following series of screening criteria to determine if a development project would require further VMT evaluation. If a project requires a discretionary action and does not satisfy either T-2.1-1 or T-2.1-2, as detailed below, a "No Impact" determination can be made:

- T-2.1-1: Would the land use project generate a net increase of 250 or more daily vehicle trips?
- T-2.1-2: Would the project generate a net increase in daily VMT?

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[12] *CEQA Guidelines Section 15064.3(b)(1).*

[13] *CEQA Guidelines Section 15064.3(b)(1).*

The VMT Calculator does not include eldercare facility as a land use option. Therefore, in consultation with LADOT, a custom land use input was developed based on published trip generation rates in Trip Generation Manual, 10th Edition and a review of other residential type land uses available in the VMT Calculator. Based on the Project's proposed land uses and location, the Project is expected to generate a net reduction of 75 daily trips. In addition, as summarized in Table IV.I-2 on page IV.I-29, the Project is also estimated to generate a net reduction of A.M. and P.M. trips. Specifically, the Project would result in 16 fewer net morning peak hour trips and nine fewer net afternoon peak hour trips. Therefore, the Project satisfies the screening criteria under T-2.1-1 for a "no impact" determination. **Thus, the Project would not require further VMT evaluation under the City's adopted VMT thresholds (T-2.1-1 or T-2.1-2) and no impact related to VMT would occur as part of the Project.**

(2) Mitigation Measures

No Project-levelimpacts with respect to CEQA Guidelines Section 15064.3 would occur. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

No Project-level impacts with respect to CEQA Guidelines Section 15064.3 would occur. Therefore, no mitigation measures were required or included.

Threshold (c): Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

As discussed in Section VI, Other CEQA Considerations, of this Draft EIR, and evaluated in the Initial Study prepared for the Project (included in Appendix A of this Draft EIR), through public access would be maintained from both sides of Bellwood Avenue through the Project Site, and the existing intersections of Bellwood Avenue and Olympic Boulevard would not be affected by the proposed realignment of Bellwood Avenue as part of the Project. In addition, the proposed realignment would not introduce any sharp curves or involve incompatible uses. Further, the proposed realignment of Bellwood Avenue would be subject to review and approval of the City Department of Building and Safety, LADOT, and Bureau of Engineering to ensure adequate design. Additionally, the driveways and vehicular motor court for the Project would be placed along the realigned portion of Bellwood Avenue and would be designed and located at a distance from Olympic Boulevard to limit queue spillovers into the public right-of-way and interruptions to pedestrian flow and safety. Therefore, the Project's motor court and driveways would not substantially increase vehicle-vehicle conflicts and would not present any geometric design hazards as it related to traffic movement. The driveway design would not restrict sight

Table IV.I-2
Project Trip Generation Estimates[a]

Land Use	Size	A.M. Peak Hour			P.M. Peak Hour		
		In	Out	Total	In	Out	Total
Proposed Project							
Independent Living	71 du	3	2	5	7	6	13
Assisted Living[b]	99 beds	12	7	19	10	16	26
Memory Care[c]	46 beds	6	3	9	5	7	12
Subtotal Proposed Project Trips[d]		**21**	**12**	**33**	**22**	**29**	**51**
Existing Uses to Be Removed							
Multi-family Housing (low-rise)	112 du	12	40	52	40	23	63
Less Walk-in/Transit Reduction (5%)[e]		*-1*	*-2*	*-3*	*-2*	*-1*	*-3*
Subtotal Existing Trips		**11**	**38**	**49**	**38**	**22**	**60**
Total Net New Trips		**10**	**(26)**	**(16)**	**(16)**	**7**	**(9)**

[a] *The number of trips was estimated using rates published in the Institute of Transportation Engineers'* Trip Generation, 10th Edition *manual. These rates are based on surveys of similar land uses at sites around the county and are used to calculate the number of vehicle trips traveling to and from the Project Site based on the size of each land use component.*

[b] *The 75 assisted living guestrooms include 51 one-bedroom units and 24 two-bedroom units.*

[c] *The 46 memory care guestrooms consist only of studio units.*

[d] *No transit/walk-in reduction has been applied to the proposed Project.*

[e] *Per LADOT's Transportation Impact Study Guidelines, the Project Site is located within a 0.25-mile walking distance from a local bus stop. Therefore, a transit/walk-in reduction is applied to the existing uses to account for transit usage and walking visitor arrivals from the adjacent commercial developments.*

Source: Gibson Transportation Consulting, Inc., 2020.

lines, allowing drivers to safely identify approaching vehicles, pedestrians, and bicyclists before committing to turn. **Thus, the Project would not result in a substantial increase in hazards due to a geometric design feature or incompatible use. As determined in the Initial Study, impacts with respect to Threshold (c) would be less than significant. No further analysis is required.**

Threshold (d): Would the Project result in inadequate emergency access?

(1) Impact Analysis

Construction activities associated with the Project could potentially impact the provision of emergency services by the LAFD and the LAPD in the vicinity of the Project Site as a result of construction impacts to the surrounding roadways. In particular, the Project would involve the vacation and realignment of Bellwood Avenue and may require infrastructure improvements or upgrades that could temporarily necessitate lane closures on nearby roadways.

According to the Safety Element of the City of Los Angeles General Plan, the nearest disaster route to the Project Site is Olympic Boulevard, which is approximately 70 feet north of the Project Site and provides arterial access to the Project Site and surrounding uses.

Typical construction activity would occur between 7:00 A.M. and 9:00 P.M. on weekdays in accordance with LAMC Section 41.40. Peak truck activity would occur during construction of the mat foundation, which would occur as part of the initial building stages, and peak worker activity would occur during finishes/coating, which occurs at the end of the construction process. Up to 200 concrete truck roundtrips (400 one-way trips) are forecast to occur during the mat foundation period[14] (The mat foundation period is anticipated to occur over approximately 1 to 3 days). Up to 81 daily haul truck roundtrips (162 one way trips) and 5 daily delivery truck roundtrips (10 one way trips) would occur during the grading and excavation period, totaling 86 daily truck roundtrips (172 one way trips).

Haul trucks would travel on approved truck routes between the Project Site and the San Diego Freeway (I-405) or the Santa Monica Freeway (I-10). Incoming trucks from the I-405 Freeway would exit the I-405 Freeway at Olympic Boulevard, heading north on Sawtelle Boulevard, and east on Olympic Boulevard, and turn right on Bellwood Avenue to the Project Site. Outgoing trucks to the I-405 Freeway would exit the Project Site onto Bellwood Avenue, head east on Olympic Boulevard, south on Century Park East, west on Pico Boulevard, north on Cotner Avenue to the I-405 northbound on-ramp. Incoming trucks from the I-10 Freeway would exit the I-10 Freeway at Overland Avenue, heading north on Overland Avenue, head east on Olympic Boulevard, and turn right on Bellwood Avenue to the Project Site. Outgoing trucks to the I-10 Freeway would exit the Project Site onto Bellwood Avenue, head east on Olympic Boulevard, south on Century Park East, east on Pico Boulevard, and south on La Cienega Boulevard to the I-10 east bound on-ramp.

Based on regionally accepted standards, a passenger car equivalency (PCE) of 2.0 was applied to equate larger trucks to passenger vehicles during the peak hours.[15] The maximum 13 hourly concrete truck and haul truck roundtrips would be equivalent to 26 PCE roundtrips (52 one-way trips). In accordance with Project Design Feature PDF TR-PDF-1, concrete, haul, and delivery trucks would generally operate outside of the peak

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[14] *Based on input from the Project Applicant, a maximum of 13 haul truck and concrete truck roundtrips can be accommodated at the Project Site within a given hour. As such, the 200 estimated daily concrete truck roundtrips over an approximate 12-hour period is conservative and overstated.*

[15] *Transportation Research Circular No. 212 (Transportation Research Board, 1980) defines PCE for a vehicle as the number of through moving passenger cars to which it is equivalent based on the vehicle's headway and delay-creating effects. Table 8 of the Transportation Research Circular No. 212 and Exhibit 16.7 of the 2000 Highway Capacity Manual (Transportation Research Board, 2000) suggest a PCE of 2.0 for trucks.*

hours and temporary traffic controls would be used to ensure adequate traffic flow on public roadways (e.g., flag men, signage, etc.). Therefore, concrete, haul, and delivery trucks would not impede emergency access in the Project vicinity.

Construction worker traffic would depend on the number of construction workers employed during various construction phases, as well as the mode and time of travel of the workers. According to construction projections prepared for the Project, a maximum of 200 trips by workers could be generated daily to the construction site during the finishes/coating phase. The hours of construction typically require workers to be on-site before the A.M. commuter peak period of 7:00 to 9:00 A.M. and allow them to leave before or after the P.M. peak period of 3:00 to 6:00 P.M.. Therefore, most, if not all, of the construction worker trips would occur outside the typical weekday commuter A.M. and P.M. peak periods. As such, construction worker traffic would not result in substantial traffic that might affect traffic flow and emergency access. In addition, during construction, restrictions on construction worker parking on public right-of-way in the vicinity of (or adjacent to) the Project Site would be identified as part of the Construction Management Plan, as described above in Project Design Feature TR-PDF-1. Furthermore, the Construction Management Plan would include measures to ensure pedestrian safety along the affected sidewalks and temporary walkways (e.g., use of directional signage, maintaining continuous and unobstructed pedestrian paths, and/or providing overhead covering).

As part of the construction management plan, construction activities associated with the new building and on-site improvements would take place within the Project Site. However, the Project may require infrastructure improvements or upgrades that could temporarily necessitate lane closures in nearby roadways. The Project's Construction Management Plan would require approval from LADOT prior to the start of demolition or construction to ensure that adequate and safe access will remain available within and near the Project Site during construction activities. Appropriate construction traffic control measures (e.g., detour signage, delineators, etc.) would also be implemented, as necessary, to ensure emergency access to the Project Site and to ensure traffic flow is maintained on adjacent right-of-ways, as well as on the City-designated disaster route along Olympic Boulevard.

With regards to operation, as described in Section II, Project Description, of this Draft EIR, existing vehicular access to the Project Site would be maintained and would be provided via Bellwood Avenue from Olympic Boulevard. While the portion of Bellwood Avenue that bisects the Project Site would be vacated and realigned, continuous public access through Bellwood Avenue would be maintained, and emergency access to the Project Site and surrounding area would continue to be provided. Additionally, the proposed realignment would comply with the City's applicable requirements, including emergency access requirements set forth by the Los Angeles Department of Building and Safety and LAFD. The Project's driveways and internal circulation would be designed to

meet all applicable City Building Code and Fire Code requirements regarding site access, including providing adequate emergency vehicle access. Compliance with applicable City Building Code and Fire Code requirements, including emergency vehicle access, would be confirmed as part of LAFD's fire/life safety plan review and LAFD's fire/life safety inspection for new construction projects, as set forth in Section 57.118 of the LAMC, and which are required prior to the issuance of a building permit. The Project also would not include the installation of barriers that could impede emergency vehicle access. Furthermore, pursuant to California Vehicle Code Section 21806, the drivers of emergency vehicles are generally able to avoid traffic in the event of an emergency by using sirens to clear a path of travel or by driving in the lanes of opposing traffic. As such, emergency access to the Project Site and surrounding area would be maintained and the Project would not result in inadequate emergency access during operation of the Project.

Based on the above the Project would not result in inadequate emergency access during construction and operation of the Project. As such, impacts to emergency access would be less than significant.

(2) Mitigation Measures

Project-level impacts related to emergency access would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to emergency access were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

e. Cumulative Impacts

(1) Impact Analysis

(a) Conflict with a Program, Plan, Ordinance or Policy Addressing the Circulation System

As discussed above, the Project would not result in an increase in the use of transit when compared with existing conditions and would not generate an increase in daily vehicle trips when compared with existing conditions. In addition, the Project would develop new housing in a HQTA as encouraged by SCAG's 2016–2020 and 2020–2045 RTP/SCS. Impacts to pedestrian and bicycle facilities are largely project-specific, and as discussed above, Project impacts would be less than significant. Similar to the Project, the related projects would be required to provide adequate pedestrian access and provide short-term and long-term bicycle parking in accordance with LAMC Section 12.21-A,16(a).

Furthermore, driveway access would be required to conform to City standards and would be designed to provide adequate sight distance, sidewalks, and/or pedestrian movement controls that would meet the City's requirements to protect pedestrian safety. **Thus, cumulative impacts with regard to conflicts with programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities would be less than significant. The Project's impacts would not be cumulatively considerable, and cumulative impacts would not occur.**

(b) Vehicle Miles Traveled

As discussed in Section 2.2.4 of the Traffic Assessment Guidelines, projects that are consistent with SCAG's 2016–2020 and 2020–2045 RTP/SCS are considered to have a less than significant cumulative impact on VMT. Further, projects that do not have a project impact based on an efficiency-based impact threshold (VMT per capita or VMT per employee) in the project analysis are considered to not have a cumulative VMT impact. As discussed in detail in Section IV.F, Greenhouse Gas Emissions, and Section IV.G, Land Use, of this Draft EIR, the Project would be consistent with the 2016–2040 RTP/SCS. As described above, the Project would not result in a VMT impact, and would therefore align with the long-term VMT and GHG goals of the SCAG RTP/SCS. Furthermore, the Project would develop new housing in a HQTA as encouraged by SCAG's 2016–2020 and 2020–2045 RTP/SCS. **As the Project's VMT impacts would not be cumulatively considerable, cumulative VMT impacts with respect to CEQA Guidelines Section 15064.3 would be less than significant.**

(c) Hazardous Geometric Design Features

As discussed above, through public access would be maintained from both sides of Bellwood Avenue through the Project Site, and the existing intersections of Bellwood Avenue and Olympic Boulevard would not be affected by the proposed realignment of Bellwood Avenue as part of the Project. In addition, the proposed realignment would not introduce any sharp curves or involve incompatible uses. Moreover, the final design of the realignment would be reviewed by the City Department of Building and Safety, Bureau of Engineering, and LADOT during site plan review to ensure adequate design. Further, the design and implementation of new driveways associated with the Project would comply with the City's applicable requirements, including emergency access requirements set forth by LADBS and LAFD. The design of related projects would also be reviewed by the LADBS, BOE and the LAFD, as applicable, during the City's plan review process to ensure all applicable requirements are met. **Therefore, the Project's contribution to impacts under cumulative conditions would not be considerable, and cumulative impacts with respect to hazardous geometric design features would be less than significant.**

(d) Emergency Access

As analyzed above, construction and operation of the Project would not result in inadequate emergency access, and Project impacts to emergency access would be less than significant. As with the Project, any driveway and/or circulation modifications proposed within or adjacent to the related project sites would be required to meet all applicable City Building Code and Fire Code requirements regarding site access, including providing adequate emergency vehicle access. Compliance with applicable City Building Code and Fire Code requirements, including emergency vehicle access, would be confirmed as part of LAFD's fire/life safety plan review and LAFD's fire/life safety inspection for new construction projects, as set forth in Section 57.118 of the LAMC, and which are required prior to the issuance of a building permit. Moreover, in accordance with regulatory requirements, the related projects would implement measures to ensure adequate flow of vehicles and access during construction. Like the Project, operation of the related projects would also be anticipated to provide for safe and efficient circulation including adequate sight distances and implementation of multi-modal transportation strategies to facilitate the dispersal of traffic. Also, as previously discussed, pursuant to California Vehicle Code Section 21806, the drivers of emergency vehicles are generally able to avoid traffic in the event of an emergency by using sirens to clear a path of travel or by driving in the lanes of opposing traffic. Furthermore, since modifications to access and circulation plans are largely confined to a project site , a combination of project-specific impacts with those associated with other related projects that could lead to cumulative impacts is not expected. **Therefore, the Project's contribution to impacts under cumulative conditions would not be considerable, and cumulative impacts with respect to emergency access would be less than significant.**

(2) Mitigation Measures

Cumulative impacts related to the consistency with adopted plans, programs, ordinances, and policies; VMT/CEQA Guidelines Section 15064.3; hazardous geometric design features; and inadequate emergency access would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

IV. Environmental Impact Analysis

J. Tribal Cultural Resources

1. Introduction

This section of the Draft EIR provides an analysis of the Project's potential impacts on tribal cultural resources. This section is based in part on the Tribal Cultural Resources Report for The Bellwood Avenue Project (TCR Report) prepared by Dudek (June 2021), included as Appendix I of this Draft EIR. The impact analysis is also based on a California Historical Resources Information System (CHRIS) records search conducted by the South Central Coastal Information Center (SCCIC) at California State University Fullerton, a Sacred Lands File (SLF) records search conducted by the California Native American Heritage Commission (NAHC), and consultation with the Gabrieleño Band of Mission Indians—Kizh Nation.[1]

2. Environmental Setting

a. Regulatory Framework

California law protects Native American burials, skeletal remains, and associated grave goods regardless of the antiquity and provides for the sensitive treatment and disposition of those remains.

On September 25, 2014, Governor Brown signed into law Assembly Bill 52 (AB 52), which amended Public Resources Code (PRC) Section 5097.94 and added Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to establish that an analysis of a project's impact on cultural resources include whether the project would impact "tribal cultural resources." PRC Section 21074 sets forth the following:

[1] *As discussed further below, AB 52 notification letters were sent to all of the California Native American tribes that are traditionally and culturally affiliated with the general Project area. The Gabrieleño Band of Mission Indians—Kizh Nation was the only tribe to respond and request consultation.*

(a) "Tribal cultural resources" are either of the following:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.[2]

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1.[3] *In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.*

(b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

(c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2,[4] *or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2*[5] *may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).*

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[2] *Per subdivision (k) of PRC Section 5020.1, "local register of historical resources" means a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution.*

[3] *Subdivision (c) of PRC Section 5024.1 provides the National Register criteria for listing of historical resources in the California Register.*

[4] *Per subdivision (g) of PRC Section 21083.2, a unique archaeological resource means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) contains information needed to answer important scientific research questions and that there is a demonstrable pubic interest in that information; or (2) has a special and particular quality such as being the oldest of its type or the best available example of its type; or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.*

[5] *Per subdivision (h) of PRC Section 21083.2, a nonunique archaeological resource means an archaeological artifact, object, or site which does not meet the criteria in subdivision (g). A nonunique*

(Footnote continued on next page)

For a project for which a notice of preparation for a draft EIR was filed on or after July 1, 2015, the lead agency is required to consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if: (1) the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area; and (2) the tribe requests consultation, prior to the release of a negative declaration, mitigated negative declaration or environmental impact report for a project. PRC Section 21080.3.1(b) defines "consultation" with a cross-reference to Government Code Section 65352.4, which applies when local governments consult with tribes on certain planning documents and states the following:

> *"Consultation" means the meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance.*

The provisions in PRC Section 21080.3.2(a) enumerate topics that may be addressed during consultation, including identification of the significance of tribal cultural resources, determination of the potential significance of project impacts on tribal cultural resources and the type of environmental document that should be prepared, and identification of possible mitigation measures and project alternatives.

PRC Section 21084.3 also states that public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. This section of the PRC also includes examples of mitigation measures that may be considered to avoid or minimize the significant adverse effects.

Consultation ends when either of the following occurs prior to the release of the environmental document:[6]

1. Both parties agree to measures to avoid or mitigate a significant effect on a tribal cultural resource. Agreed upon mitigation measures shall be recommended for inclusion in the environmental document (PRC Section 21082.3(a)); or

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archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects.

[6] *Governor's Office of Planning and Research, Tribal Consultation Guidelines, Supplement to General Plan Guidelines, November 14, 2005.*

2. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Sections 21080.3.2(b)(1)-(2) and 21080.3.1(b)(1)).

With regard to human remains, CEQA Guidelines Section 15064.5 addresses consultation requirements if an initial study identifies the existence of, or the probable likelihood of Native American human remains within the project site. This section of the CEQA Guidelines, as well as Health and Safety Code Section 7050.5 and PRC Section 5097.9, also address treatment of human remains in the event of accidental discovery.

b. Existing Conditions

(1) Existing Project Site Conditions

The Project is located in the urbanized West Los Angeles area of the City. The Project Site is located approximately 6 miles east of the Pacific Ocean and approximately 10.5 miles west of the Los Angeles River.

The Project Site is currently developed with several multi-family residential buildings and associated structures and parking, and includes the portion of Bellwood Avenue that bisects the Project Site. Specifically, the Project Site includes three multi-family residential developments that include 112 units totaling 43,939 square feet. Existing landscaping within the Project Site is ornamental in nature and includes shrubs and trees. The Project Site is underlain by artificial fill and unconsolidated to semi-consolidated Pleistocene age alluvial and marine terrace deposits. Specifically, the soils underlying the Project Site consist of sand and sandy silt with occasional lenses of well graded sand and gravel.[7] The soils underlying the existing development are classified by the U.S. Department of Agriculture (USDA) as Urban land-Sepulveda-Pierview[8] complex and Urban land–Anthraltic Xerothents, loamy substratum-Grommet complex.[9,10] Due to the size and nature of past

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[7] *Geotechnologies, Inc., Geotechnical Investigation, Proposed Senior Assisted Living Facility, 10328–10384 W. Bellwood Avenue, Los Angeles, California, May 31, 2018, included in Appendix A of this Draft EIR.*

[8] *Sepulveda soils are human-transported material found on alluvial remnants derived from sedimentary rock and Pierview soils are discontinuous human-transported material over alluvium derived from slate, sandstone or shale.*

[9] *Anthraltic Xerothents soils are human-transported material found on young alluvium remnants derived from sedimentary rock and Grommet soils are discontinuous human-transported material over young alluvium derived from sedimentary rock.*

[10] *U.S. Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, Survey Area Data, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx, 2019, accessed November 6, 2019.*

development associated with the Project Site, the shallower deposits with potential to support the presence of cultural deposits have likely been disturbed.

(2) City of Los Angeles Ethnographic Context

According to the TCR Report, the history of the Native American communities in the Los Angeles region prior to the mid-1700s has largely been reconstructed through later mission-period and early ethnographic accounts. The first records of the Native American inhabitants of the region were brief, generally peripheral, and were combined with observations of the landscape. These accounts were prepared predominantly by European merchants, missionaries, military personnel, and explorers with the intent of furthering respective colonial and economic aims. As such, they were not intended to be unbiased accounts regarding the cultural structures and community practices of cultural groups. The establishment of the missions in the region brought more extensive documentation of Native American communities, although these groups did not become the focus of formal and in-depth ethnographic study until the early 20th century. Additionally, it is important to note that while many of those providing information for these early ethnographies were able to provide information based on personal experience, a significantly large proportion of these informants were born after 1850, by which time Native Americans would have had considerable contact with Europeans. This is important to note when examining these ethnographies since considerable culture change had occurred by 1850 among the Native American survivors of California. This is also a particularly important consideration for studies focused on tribal cultural resources, where concepts of “cultural resource” and the importance of traditional cultural places are intended to be interpreted based on the values expressed by present-day Native American representatives and may vary from archaeological values.

Based on ethnographic information, it is believed that at least 88 different languages were spoken from Baja California Sur to the southern Oregon state border at the time of Spanish contact. Tribes in the Los Angeles region have traditionally spoken Takic languages that may be assigned to the large Uto-Aztecan family. These groups include the Gabrielino (alternately Gabrieleño), Cahuilla, and Serrano.

The archaeological record indicates that the Project area and vicinity were occupied by the Gabrieleño, who arrived in the Los Angeles Basin around 500 B.C. Surrounding cultural groups included the Chumash and Tataviam to the northwest, the Serrano and Cahuilla to the northeast, and the Juaneño and Luiseño to the southeast. The name “Gabrielino” or “Gabrieleño” denotes those people who were administered by the Spanish from the San Gabriel Mission. While this population primarily included Indigenous individuals local to the immediate region, individuals from surrounding areas and other tribes are also shown from records to have become members of San Gabriel Mission. As such, post-mission Gabrieleño communities may have complex historical and cultural

understandings, with associations to multiple ethnic groups. Many modern Gabrieleño refer to themselves as the Tongva, within which there are a number of regional bands, to identify themselves as descendants of the indigenous people living across the plains of the Los Angeles Basin. Though the names "Tongva" or "Gabrieleño" are the most common names used by modern Native American groups, and are recognized by the Native American Heritage Commission, there are groups within the region that self-identify differently, such as the Gabrieleño Band of Mission Indians—Kizh Nation.

The Tongva established large, permanent villages along rivers and streams, and in sheltered areas along the coast. Tongva lands included the greater Los Angeles Basin and three Channel Islands (San Clemente, San Nicolas, and Santa Catalina). These lands stretched from the foothills of the San Gabriel Mountains to the Pacific Ocean. A total tribal population has been estimated of at least 5,000 persons, but recent ethnohistoric work suggests a number approaching 10,000 persons.

The largest, and best documented, ethnographic Tongva village was that of Yanga (also known as Yaangna, Janga, and Yabit), which was in the vicinity of downtown Los Angeles. This village was reportedly first documented by the expedition led by Captain Gaspar de Portola in 1769. As the Mission San Gabriel was established in 1771, Mission records indicate that 179 Gabrielino inhabitants of Yanga were members of the San Gabriel Mission. Based on this information, Yanga may have been the most populated village in the Western Gabrielino territory. The village of Cahuenga, second in size and less thoroughly documented, is located just north of the Cahuenga Pass.

The environment surrounding the Tongva included mountains, foothills, valleys, deserts, riparian, estuarine, and open and rocky coastal eco-niches. As with most Indigenous Californians, acorns were the staple food and were supplemented by the roots, leaves, seeds, and fruits of a wide variety of flora (e.g., islay, cactus, yucca, sages, and agave). Fresh water and saltwater fish, shellfish, birds, reptiles, and insects, as well as large and small mammals, were also consumed. A wide variety of tools and implements were used by the Tongva to gather and collect food resources. These included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. The Tongva also processed food with a variety of tools, including hammerstones and anvils, mortars and pestles, manos and metates, strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks. Catalina Island steatite was used to make ollas and cooking vessels. Plank canoes and tule balsa canoes were used for fishing, travel, and trade between the mainland and the Channel Islands.

At the time of Spanish contact, the basis of Tongva religious life was the Chinigchinich religion, centered on the last of a series of heroic mythological figures. Chinigchinich was known to give instruction on laws and institutions, as well as dance, which was the primary religious act for the Tongva society. While the Chinigchinich religion

seems to have been relatively new when the Spanish arrived, it spread south into the Southern Takic groups even as Christian missions were being built. As such, the Chinigchinich religion may represent a mixture of indigenous and Christian belief and practices.

Deceased Tongva were either buried or cremated, with burial more common on the Channel Islands and the neighboring mainland coast and cremation predominating on the remainder of the coast and the interior. Cremation ashes have been found buried within stone bowls and in shell dishes, as well as scattered among broken ground stone implements. These archaeological finds correspond with ethnographic descriptions of an elaborate mourning ceremony that included a wide variety of offerings, including seeds, stone grinding tools, otter skins, baskets, wood tools, shell beads, bone and shell ornaments, and projectile points and knives. Offerings varied with the sex and status of the deceased. However, at the behest of the Spanish missionaries, cremation essentially ceased.

(3) Assembly Bill 52 Consultation

In compliance with the requirements of AB 52, Department of City Planning staff provided formal notification of the Project on May 30, 2019 (see Appendix I of this Draft EIR). Letters were sent via FedEx and certified mail to the following California Native American tribes that requested notification:

- Gabrieleño Band of Mission Indians—Kizh Nation
- Fernandeño Tataviam Band of Mission Indians
- Gabrielino Tongva Indians of California Tribal Council
- Gabrielino/Tongva Nation
- Gabrielino/Tongva San Gabriel Band of Mission Indians
- Gabrielino-Tongva Tribe
- San Fernando Band of Mission Indians
- Soboba Band of Luiseño Indians
- Torres Martinez Desert Cahuilla Indians

Two response letters were received by the City. On June 12, 2019, the City received a response letter from Mr. Michael Mirelez, Cultural Resource Coordinator of the Torres-

Martinez Desert Cahuilla Indians deferring all future project notifications to Tribes closer to the Project Site.

On June 4, 2019, the City received a response letter from Mr. Andrew Salas, Chairman of the Gabrieleño Band of Mission Indians—Kizh Nation. The letter states the following and requested consultation with the City:

> *The above proposed project location is within our Ancestral Tribal Territory; therefore, our Tribal Government requests to schedule a consultation with you as the lead agency, to discuss the project and surrounding location in further detail.*

On July 31, 2019, consultation occurred between Department of City Planning staff and representatives from the Gabrieleño Band of Mission Indians—Kizh Nation. During the consultation, the tribal representatives observed that :

- Santa Monica Boulevard was a known trade route, which is a cultural resource;
- The Project Site is located near a location of medicinal natural springs, which are a cultural resource.

No specific location of the identified springs was provided. The tribal representatives provided supporting documentation including excerpts from unspecified literary sources and historical maps. An explanation of how the information relates to the Project was not provided. The Gabrieleño Band of Mission Indians—Kizh Nation also provided the City with mitigation language recommended for the management of TCRs. Review of provided documentation suggests that the nearest historically mapped "ancient" road was approximately 0.16 mile north of the Project Site. With regard to the presence of medicinal natural springs, the nearest springs are mapped on Kirkman-Harriman's 1938 map as slightly over 2.5 miles west of the Project Site. These springs were also noted in Father Crespi's diary entry dated August 4, 1769. In general, documentation provided by the Tribe does not appear to include specific information that suggests the Project could potentially impact a TCR.

Following the consultation, the Kizh Nation provided the City, via email on August 5, 2019, with screen shots of ten historical map images, a screen shot of a pictorial depicting Rancho San Jose de Bueno Ayres (ca. 1840), and screen shots of two pages of text from unknown literary sources. Table IV.J-1 on page IV.J-9 provides the Kizh Nation's summary for each respective map.

Table IV.J-1
Summary of Historic Maps Provided by the Gabrieleño Band of Mission Indians—Kizh Nation (Tribe)

Map Year	Map Source	Description of Resources in Maps
1881	10328–10384 Bellwood Ave__1881: Ranchos: Unknown Map superimposed on Google Earth	The Tribe states that this map indicates that the Project area is within the Village of Yangna. The Tribe states that all of their mainland villages overlapped each other to facilitate movement of tribal cultural resources (TCRs) throughout the landscape and to their sister tribes outside of their ancestral territory. The Tribe further states that the village use areas were usually shared between two or more adjoining villages depending on the type, quantity, quality, and availability of the natural resources. The Tribe states that for these reasons, human activities can be pronounced within the shared areas and that TCRs may be present in the soil layers from those years of human activity within that landscape. The Tribe also states that this map indicates that the Project area is within Rancho Rincon de Los Bueyes. The Tribe states that all Ranchos were placed on ancient village locations because of the available resources in that area for human sustenance. According to the Tribe, these resources include waterways, waterbodies, springs, elevated ground, and food resources. The Tribe references the verbal explanation provided during the consultation meeting and the documents and images of maps provided to the City pertaining to how Rancho Rincon de Los Bueyes was located within their ancient village of Yangna.
1898	10328–10384 Bellwood Ave__1898: Unknown Map superimposed on Google Earth	This map is a map showing railroads, subdivisions and Ranchos with a place marker for the Project Site. The Tribe states that this map indicates the Project Site's close proximity to a railroad that existed in this location. The Tribe states that all railroads were placed on top of its traditional trade routes because the first railroad planners that came out west found the topography too varied and, thus, selected paths of the Tribe's traditional trade routes, which had already been flattened by human travel over thousands of years of use. The Tribe states that: (1) there are many trade routes around the Project area; (2) these routes were also used for visiting family, going to ceremonies, accessing recreation areas, as well as foraging areas; (3) along these routes were seasonal or permanent ramadas, trade depots, and habitation areas; and (4) often along these trade routes were isolated burials and cremations of those who died along the trail. The Tribe further states that these trade routes are considered "cultural landscapes," which house objects and are therefore a TCR.
1901	Unknown Map superimposed on Google Earth	This map is a map showing railroads and Ranchos with a place marker for the Project Site. The Tribe states that this map indicates the Project Site's close proximity to a railroad that existed in this location. The Tribe states that all railroads were placed on top of its traditional trade routes because the first railroad planners that came out west found the topography too varied and, thus, selected paths of the Tribe's traditional trade routes, which had already been flattened

Table IV.J-1 (Continued)
Summary of Historic Maps Provided by the Gabrieleño Band of Mission Indians—Kizh Nation (Tribe)

Map Year	Map Source	Description of Resources in Maps
		by human travel over thousands of years of use. The Tribe states that: (1) there are many trade routes around the Project area; (2) these routes were also used for visiting family, going to ceremonies, accessing recreation areas, as well as foraging areas; (3) along these routes were seasonal or permanent ramadas, trade depots, and habitation areas; and (4) often along these trade routes were isolated burials and cremations of those who died along the trail. The Tribe further states that these trade routes are considered "cultural landscapes," which house objects and are therefore a TCR.
[1915]	Image 1 (3): Indian Villages Near Courses of the Los Angeles River. Modified map taken from Gumprecht 2001 [1999] Figure 4.2: 135), superimposed on Google Earth[a]	No explanatory text provided by the Tribe.
1920	10328–10384 Bellwood Ave__1920: Unknown Map superimposed on Google Earth	This map is provided to show the hydrography or waterways that existed around the Project Site. The Tribe states that seasonal or permanent hamlets, permanent trade depots, ceremonial and religious sites, and burials and cremations took place along these watercourses. Additionally, the Tribe states that these waterways are considered "cultural landscapes." Furthermore, there is higher than average potential to encounter TCRs and human remains during ground-disturbing activities near larger bodies of water.
1938	10328–10384 Bellwood Ave__1938: Kirkman-Harriman Map superimposed on Google Earth	The Tribe states that this map indicates that the Project area is within the Village of Yangna. The Tribe states that all of their mainland villages overlapped each other to facilitate movement of TCRs throughout the landscape and to their sister tribes outside of their ancestral territory. The Tribe further states that the village use areas were usually shared between two or more adjoining villages depending on the type, quantity, quality, and availability of the natural resources. The Tribe states that for these reasons, human activities can be pronounced within the shared areas and that TCRs may be present in the soil layers from those years of human activity within that landscape. The Tribe states that: (1) there are many trade routes around the Project area; (2) these routes were also used for visiting family, going to ceremonies, accessing recreation areas, as well as foraging areas; (3) along these routes were seasonal or permanent ramadas, trade depots, and habitation areas; and (4) often along these trade routes were isolated burials and cremations of those who died along the trail. The Tribe further states that these trade routes are considered "cultural landscapes," which house objects and are, therefore, a TCR.

Table IV.J-1 (Continued)
Summary of Historic Maps Provided by the Gabrieleño Band of Mission Indians—Kizh Nation (Tribe)

Map Year	Map Source	Description of Resources in Maps
		This map is provided to also show the hydrography or waterways that existed around the Project Site. The Tribe states that seasonal or permanent hamlets, permanent trade depots, ceremonial and religious sites, and burials and cremations took place along these watercourses. Additionally, the Tribe states that these waterways are considered "cultural landscapes." Furthermore, there is higher than average potential to encounter TCRs and human remains during ground-disturbing activities near larger bodies of water.
1938	Image 3: Kirkman-Harriman Map	Previously summarized above in map "10328–10384 Bellwood Ave__1938: Kirkman-Harriman Map" that is superimposed on Google Earth.
No date provided	Image 1 (2): General Project Location Map	No explanatory text provided by the Tribe.
No date provided	Image 2: Unknown Map with Ranchos	No explanatory text provided by the Tribe.
[1996]	Image 3 (1): Map from McCawley (1996) that depicts Gabrieleño Communities[a]	No explanatory text provided by the Tribe.

Note: Years within brackets were identified by Dudek.
[a] *For maps provided, sources were identified by Dudek.*
Source: Dudek, 2021.

The maps provided appear to be topographic maps, including maps of rancho boundaries and/or subdivisions, as well as the Kirkman-Harriman map (Figure 3 of Appendix I of this Draft EIR), a map depicting Gabrieleño communities (McCawley 1996), a map taken from Gumprecht (2001 [1999] Figure 4.2: 135) originally showing areas subject to inundation that was modified to include locations of "Indian Villages Near Courses of the Los Angeles River," and a general Project location map. Of these ten maps, six maps are overlaid on Google Earth with place markers for the Project Site. The unknown literary sources provided by the Kizh Nation appear to be in reference to typical habitations and clothing, as well as information about villages near water sources.

In addition to the maps, unknown literary sources, and the pictorial of the Rancho San Jose de Buenos Ayres (Rancho), the Kizh Nation also provided a brief background history summarizing the Gabrieleño territory, the complexity of their subsistence technology, trade network, and ritual. The summary included a history of the village of the Yangna, including the location, its relationship with the pueblo, and the relocation of the

village that may have been politically motivated, leading to the closure of the new settlement, "Pueblito." According to the summary, the displaced Yangna members were compensated and their employers were required to provide them shelter as a result. Further, the Kizh Nation provided a brief summary on the history of the Rancho and the change of ownership including land use over time. In addition, according to the Kizh Nation, the [Project] area was located within the boundaries of the Rancho.

On October 8, 2020, the City sent a follow-up email to the Gabrieleño Band of Mission Indians—Kizh Nation requesting further documentation. To date, no other responses have been received from the tribal contacts regarding TCRs or other concerns about the Project. Consultation with the Kizh Nation was formally closed by the City on July 1, 2021. Government to government consultation initiated by the City, acting in good faith and after a reasonable effort, has not resulted in the identification of a TCR within or near the proposed Project Site. A record of the letters, mailings, and correspondence, excluding that deemed confidential, is included as Appendix I of this Draft EIR.

(4) Background Research

(a) Sacred Lands File Review

An SLF search request was sent to NAHC for the Project on August 19, 2019. On September 16, 2019, the NAHC responded via e-mail and indicated that the SLF search had been completed with negative results.

(b) California Historical Resources Information System Review

As part of the TCR Report, on August 16, 2019, a California Historical Resources Information System (CHRIS) records search was completed at the South Central Coastal Information Center (SCCIC) for the Project Site and a search radius of 0.5 mile (see Appendix I of this Draft EIR). The records search included mapped prehistoric, historical, and built-environment resources, California Department of Parks and Recreation (DPR) site records, technical reports, archival resources, and ethnographic references.

(i) Previously Conducted Cultural Resource Studies

Results of the records search indicated that 12 previous cultural resource studies had been conducted within a 0.5-mile radius of the Project Site between 1997 and 2014. None of these studies overlap with or are adjacent to the Project Site.

(ii) Previously Recorded Cultural Resources

The CHRIS records indicate that a total of 15 previously recorded cultural resources are located within 0.5 mile of the Project Site. The previously recorded cultural resources

consist of 13 historic-age buildings, one District consisting of multiple historic-age buildings, and one historic-age archaeological site (P-19-002479). The historic-age archaeological site is approximately 0.25 mile from the Project Site and consists of a sub-surface low-density deposit of historic-age trash and construction debris with temporally diagnostic material dating from the 1920s and 1930s. No prehistoric sites or resources documented to be of specific Native American origin have been previously recorded within the records search area of the Project Site.

(c) Review of Historic Aerials and Topographic Maps

Historic topographic maps, aerial photographs, and Sanborn Fire Insurance Maps were consulted to understand the development of the Project Site and surrounding properties. Topographic maps were available beginning from 1894 to 2015, and aerial images are available from 1952 to 2016. Sanborn maps were available from 1926.

The 1894 United States Geological Survey (USGS) topographic map from 1894 shows the Project Site and surrounding area as undeveloped with the exception of the Pasadena and Pacific Railroad to the north and a sparse webbing of roads. The Project Site is along one of these roads, although no structures are in the vicinity of the Project Site. The 1921 topographic map no longer shows the road adjacent the Project Site. To the east is an oil field with associated roads, otherwise, the Project Site and surrounding area remain undeveloped. The 1925 topographic map highlights the undeveloped terrain of the Project Site and surrounding area and shows the Project Site on a western slope northeast of the confluence of two seasonal drainages. Though the 1925 topographic map depicts the area as entirely undeveloped, the 1926 Sanborn map displays an established grid infilled with single-family dwellings. In addition, Bellwood Avenue had been constructed, while Olympic Boulevard had not. The 1926 Sanborn map also shows that the Project Site has been subdivided into lots, however, the lots are vacant. The first available aerial photograph dates from 1952 and shows the Project Site as fully developed with the existing multi-family apartment buildings. in their current configuration, and Olympic Boulevard in its current alignment.

(d) Ethnographic Research and Review of Academic Literature

As part of the preparation of the Project's TCR Report, academic and ethnographic literature and materials were reviewed for information pertaining to past Native American use of the Project Site. This review included consideration of sources commonly identified though consultation, notably the 1938 Kirkman-Harriman Historical Map often referenced by the Gabrieleño Band of Mission Indians—Kizh Nation (See Figure 3 of the TCR Report, included in Appendix I of this Draft EIR). A copy of the 1938 Kirkman-Harriman map was also provided by representatives from the Gabrieleño Band of Mission Indians—Kizh Nation in connection with the AB 52 consultation described above.

According to the 1938 Kirkman-Harriman map, the Project Site is approximately 1.5 miles south of the path of Portola's first expedition in California and is within close proximity to a mapped Native American village, located west of the Project Site. The mapped Native American village and Project Site are both approximately 0.16 mile south of an unnamed, roughly east-west oriented "ancient" road. Additionally, a small southeast traveling river or tributary, approximately 0.82 mile west of the Project Site, but mapped as immediately adjacent to the previously noted Native American village site, is depicted. Also depicted on the map, over 2.5 miles west and outside of the Project Site, are two locations labeled as "spg" that likely represent natural springs. Father Juan Crespi, representative of the Franciscan Church with the Portola party, provided documentation of passage just northwest of the Project Site on August 4, 1769, and notes the presence of these springs. The nearest springs are mapped on Kirkman-Harriman's 1938 map as slightly over 2.5 miles west of the Project Site.

While demonstrating these consistencies with historical documentation such as that from the Portola expedition, it should be noted that this map is highly generalized due to scale and age, and may be somewhat inaccurate with regard to distance and location of mapped features. Additionally, this map was prepared based on review of historic documents and notes more than 100 years following secularization of the missions (in 1833). Although the map contains no specific primary references, it matches with the details documented by the Portola expedition (circa 1769–1770). While the map is a valuable representation of post-mission history, substantiation of the specific location and uses of the represented individual features would require review of archaeological or other primary documentation on a case-by-case basis. No information relating to the village site mapped nearest to the Project Site was provided within the reports identified during the CHRIS record search.

At the time of the Portola expedition in 1769 and through the subsequent mission period, the area surrounding the Project Site would have been occupied by Western Gabrieleño/Tongva inhabitants (see Figures 4 and 5 of the TCR Report). Use of Gabrielino as a language has not been documented since the 1930s. One study made an effort to map the traditional Gabrieleño/Tongva cultural use area through documented family kinships included in mission records. This process allowed the researchers to identify the relative size of tribal villages (settlements) based on the number of individuals reported in these records. Traditional cultural use area boundaries, as informed by other ethnographic and archaeological evidence, were also drawn around these clusters of villages (see Figure 6 of the TCR Report).The village site mapped closest to the Project Site was Cabuepet (or Cahuenga), located near the northern opening of the Cahuenga Pass approximately 6 to 7 miles to the northwest. This village was located near what is now Universal Studios. Mission records indicate that 123 Native American members came from this village, second only to the number of members from Yanga in the Western Gabrieleño territory. Campo de Cahuenga was also in this vicinity, which is the site where the 1847 treaty between General

Andres Pico and Lieutenant-Colonel John C. Fremont marked the surrender of Mexican California to the United States. The La Brea Tar Pits area (CA-LAN-159) was a known area of Native American use for hunting and the gathering of tar. The largest substantiated village in the vicinity was likely Yabit (or Yanga), located approximately 8 to 9 miles to the northeast. Mission records indicate that 179 Gabrieleño inhabitants of Yanga became members of San Gabriel Mission, indicating that it may have been the most populated village in the Western Gabrieleño territory. In general, the mapped position of both Yanga and Cahuenga have been substantiated through archaeological evidence, although the archaeological record has been substantially compromised by rapid and early urbanization throughout much of the region. No archaeological evidence of the nearest village on the 1938 Kirkman-Harriman map was provided in the SCCIC records search results or review of other archaeological information.

Based on the TCR Report's review of pertinent academic and ethnographic information, the Project Site falls within the boundaries of the Gabrieleño/Tongva traditional use area. In addition, as discussed above, according to the Kirkman-Harriman map, the Project Site is located relatively close to a Native American village and in the vicinity of historically mapped water sources and road; however, they are well outside of the Project Site. This observed, while there are some characteristics that would have been of value for prehistoric use of this area, there are similar resources available throughout the region. No recorded cultural resources of Native American origin have been identified in the Project Site or within a 0.5-mile records search buffer. In addition, consultation with traditionally affiliated Native American tribes to date has not identified any known TCRs that would be impacted by the proposed Project.

3. Project Impacts

a. Significance Thresholds

In accordance with Appendix G of the State CEQA Guidelines, the Project would have a significant impact related to Tribal Cultural Resources if the project would:

Threshold (a): Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

In assessing impacts related to tribal cultural resources in this section, the City will use Appendix G as the thresholds of significance. The *L.A. CEQA Thresholds Guide* does not include any criteria to evaluate tribal cultural resources impacts.

b. Methodology

A CHRIS records search for the Project Site and a 0.5-mile radius was completed on August 16, 2019. The records search included SCCIC's collections of mapped prehistoric, historical, and built-environment resources, DPR site records, technical reports, archival resources, and ethnographic references. Additional consulted sources included historic topographic maps, aerial photographs, and Sanborn Fire Insurance Maps. Pertinent academic and ethnographic literature was also reviewed for information pertaining to past Native American use of the Project area. As required by AB 52, consultation with California Native American Tribes was conducted to address potential impacts associated with Native American resources. In addition, a Sacred Lands Files search was conducted by the NAHC, on September 16, 2019, to determine the presence of any recorded tribal cultural resources on the Project Site.

c. Project Design Features

No project design features are proposed with regard to tribal cultural resources.

d. Analysis of Project Impacts

Threshold (a): Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

(1) Analysis of Project Impacts

The estimated depth of excavation for subterranean parking and building foundations associated with the Project would be approximately 30 feet below grade. It is estimated that approximately 74,800 cubic yards of soil would be exported and hauled from the Project Site during the excavation phase.

In compliance with the requirements of AB 52, the City provided formal notification of the Project on May 30, 2019 (see Appendix I of this Draft EIR) to the tribes listed above in Subsection 2.b. The 30-day response period for consultation requests concluded on June 29, 2019.

As noted above, two response letters were received by the City. On June 12, 2019, the City received a response letter from Mr. Michael Mirelez, Cultural Resource Coordinator of the Torres-Martinez Desert Cahuilla Indians deferring all future project notifications to Tribes closer to the Project Site. On June 4, 2019, the City received a response letter from Mr. Andrew Salas, Chairman of the Gabrieleño Band of Mission Indians—Kizh Nation, which noted the Project Site is located within their ancestral tribal territory. Mr. Salas stated the Project is located within a sensitive area with the potential to adversely affect tribal cultural resources and requested consultation with the City.

Consultation took place on July 31, 2019, with Department of City Planning staff and representatives from the Gabrieleño Band of Mission Indians—Kizh Nation, including Mr. Salas, Matt Teutimez, and John Torres. During the consultation, Mr. Salas stated that Santa Monica Boulevard was a known trade route. In addition to the Santa Monica Boulevard trade route, Mr. Salas noted the Project Site is located near a location of medicinal natural springs. As discussed in detail above, review of provided documentation suggests that the nearest historically mapped “ancient” road was approximately 0.16 mile north of the Project Site. With regard to the presence of medicinal natural springs, the nearest springs are mapped on Kirkman-Harriman’s 1938 map as slightly over 2.5 miles west of the Project Site. These springs were also noted in Father Crespi’s diary entry dated August 4, 1769. In general, documentation provided by the Gabrieleño Band of Mission Indians—Kizh Nation does not appear to include specific information that suggests the Project could potentially impact a TCR.

In a follow-up email on August 5, 2019, the Kizh Nation provided the City with screen shots of ten historical map images, a screen shot of a pictorial depicting Rancho San Jose de Bueno Ayres (ca. 1840), and screen shots of two pages of text from unknown literary sources. In addition to the maps, unknown literary sources, and the pictorial of the Rancho San Jose de Buenos Ayres (Rancho), the Kizh Nation also provided a brief background history summarizing the Gabrieleño territory, the complexity of their subsistence technology, trade network, and ritual. The summary included a history of the village of the Yangna, including the location, its relationship with the pueblo, and the relocation of the village that may have been politically motivated, leading to the closure of the new settlement, "Pueblito." According to the summary, the displaced Yangna members were compensated and their employers were required to provide them shelter as a result. Further, the Kizh Nation provided a brief summary on the history of the Rancho and the change of ownership including land use over time. In addition, according to the Kizh Nation, the [Project] area was located within the boundaries of the Rancho. The Tribe also provided mitigation language to the City for consideration to address the potential impacts they have identified for the Project.

As discussed above in Subsection 2.b.(4)(b)(ii), no prehistoric sites or resources documented to be of specific Native American origin have been previously recorded within the records search area of the Project Site. Therefore, there are no tribal cultural resources that are listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources on or within 0.5 mile of the Project Site. The NAHC Sacred Lands File also did not indicate the presence of Native American resources. As described by the TCR Report, the Project Site and surrounding neighborhoods have been extensively developed throughout the twentieth century and thus, the subsurface soils are unlikely to support intact TCRs. Additionally, no tribal cultural resources have been identified within the Project Site through tribal consultation that would be impacted.

A review of the documents and the comments, documents, and maps provided by the Kizh Nation during AB 52 consultation to the City was conducted, to determine whether the proposed Project would cause a substantial adverse impact to TCRs. The following is provided to address the Tribe's concerns as summarized in Table IV.J-1 on page IV.J-9.

The Tribe provided an 1881 map and stated that the Project Site is within Rancho Rincon de Los Bueyes and that this Rancho is located within their ancient village site of Yangna. A review of the map shows that the Project Site is on the boundary line between Rancho San Jose de Buenos Ayres, a land grant made by the Mexican government to Maximo Alanis in 1843, and Rancho Rincon de Los Bueyes, a land grant made by the Spanish Governor of Alta California to Bernardo Higuera and Cornelio Lopez in 1821. However, the map does not include any reference to the village site of Yangna. Moreover, the 1938 map provided by the Tribe, which was prepared by Kirkman-Harriman and also

included as Figure 3 of Appendix I of this DEIR, indicates that the Project Site is located relatively close to a Native American village, however, this village site is outside of the boundaries of the Project Site.

The 1898 map was provided by the Tribe to show the Project Site's proximity to a railroad and within Rancho San Jose de Buenos Ayres. According to the Tribe, railroads were placed on top of traditional trade routes. According to the historical topographic map and aerial images review in Appendix I of this DEIR, the Pasadena and Pacific Railroad are shown to the north and outside of the Project Site. Review of provided documentation suggests that the nearest historically mapped "ancient" road was approximately 0.16 mile north of the Project Site, and, therefore, the proposed Project would not impact the former location of the railroad and would remain within the confines of a previously developed parcel.

The 1901 map was provided by the Tribe to show that the Project Site is in close proximity to railroads and, therefore, traditional trade routes. As previously addressed, the Pasadena and Pacific Railroad are shown to the north and outside of the Project Site and would not be impacted as part of the Project.

A 1920 map was provided by the Tribe to show the hydrography or waterways that existed around the Project Site. However, a review of the historical maps indicate that the nearest mapped tributary is approximately 0.82 mile west of the Project Site.

According to the Tribe, the 1938 Kirkman-Harriman map, which was provided twice by the Tribe (also provided as Figure 3 of Appendix I of this DEIR) shows that the Project Site is located within the village of Yangna and near trade routes. The Tribe also stated that the map shows the hydrography and waterways that existed around the Project Site, which provided for seasonal or permanent seasonal or permanent hamlets, trade depots, and ceremonial and religious sites. Further, the Tribe stated that these waterways are considered "cultural landscapes" and have the potential to encounter human remains during ground-disturbing activities.

However, as is discussed in Appendix I of this DEIR, which addresses the 1938 Kirkman-Harriman map, the Project Site is within proximity to a mapped Native American village, located west of the Project Site, but is outside of the of the boundaries of the Project Site, approximately 8 to 9 miles to the northeast. Moreover, the village site mapped nearest to the Project Site and substantiated through the archaeological record was Cabuepet (or Cahuenga), which is located near the northern opening of the Cahuenga Pass approximately 6 to 7 miles to the northwest of the Project Site. Furthermore, no information relating to the village site mapped nearest to the Project Site was provided within the reports identified during the CHRIS record search. The Tribe also stated that there were many trade routes by the Project Site where railroads were placed. As

previously mentioned above, the Pasadena and Pacific Railroad are shown to the north and outside of the Project Site and the nearest historically "ancient" road was approximately 0.16 mile north of the Project Site. In addition, a small southeast traveling river or tributary depicted on the 1938 map is approximately 0.82 mile west of the Project Site.

In addition to the maps discussed above, the Kizh Nation also provided four maps without any explanatory text. Therefore, no response with regards to those maps are provided outside of the summary provided above.

Based on this information, the City, in its discretion and supported by substantial evidence, finds that the Project Site does not contain any resources determined by the City to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. Accordingly, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe. As such, Project impacts related to tribal cultural resources would be less than significant.

Nonetheless, the City generally applies a standard TCR condition of approval to projects that disturb soil to address any unanticipated discovery of TCR during grading activities. Should a potential TCR be inadvertently identified, this standard condition of approval provides for temporarily halting construction activities near the encounter and notifying the City and Native American tribes that have informed the City they are traditionally and culturally affiliated with the geographic area of the proposed project. If the City determines that the potential resource appears to be a TCR (as defined by PRC Section 21074), the City would provide any affected tribe a reasonable period of time to conduct a site visit and make recommendations regarding the monitoring of future ground disturbance activities, as well as the treatment and disposition of any discovered TCRs. The Applicant would then implement the tribe's recommendations if a qualified archaeologist reasonably concludes that the tribe's recommendations are reasonable and feasible. The recommendations would then be incorporated into a TCR monitoring plan and once the plan is approved by the City, ground disturbance activities could resume. In accordance with the condition of approval, all activities would be conducted in accordance with regulatory requirements. As a result, potential impacts to TCRs would continue to be less than significant.

(2) Mitigation Measures

Project-level impacts related to tribal cultural resources would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to tribal cultural resources were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

e. Cumulative Impacts

(1) Impact Analysis

Cumulative impacts would occur if the Project, related projects, and other future development affected the same tribal cultural resources. As shown in Figure III-1 in Section III, Environmental Setting, of this Draft EIR, a total of 6 related development projects have been identified in the vicinity of the Project Site through 2023 (the Project buildout year). These related projects consist of a variety of land uses, including retail/commercial, residential, restaurant, office, hotel, and mixed uses. However, as described above, the Project and the related projects are located within an urbanized area that has been disturbed and developed over time. In addition, as discussed above, there are no known tribal cultural resources located on the Project Site or within the Project vicinity and potential impacts to tribal cultural resources were determined to be less than significant. Similar to the Project, related projects would also undergo an environmental review process where consultation with Native American tribes would occur. Should it be determined that potential impacts would result from the related projects, such impacts would be addressed through mitigation and compliance with regulatory requirements.

Therefore, the Project and related projects would not result in significant cumulative impacts to tribal cultural resources. As such, the Project's contribution would not be cumulatively considerable, and cumulative impacts would be less than significant.

(2) Mitigation Measures

Cumulative impacts related to tribal cultural resources would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts related to tribal cultural resources were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

IV. Environmental Impact Analysis

K.1 Utilities and Service Systems—Water Supply and Infrastructure

1. Introduction

This section of the Draft EIR provides an analysis of the Project's potential impacts to water supply and the water infrastructure system serving the Project Site. The analysis includes a description of regional water supplies and the existing water infrastructure serving the Project Site, estimates the water demand associated with the Project, and assesses whether there is sufficient water supply and infrastructure capacity to meet that demand. The analysis is based on the *Senior Residential Community at the Bellwood—Water, Sewer, and Energy Infrastructure Assessment Report* (Utility Report), prepared for the Project by Fuscoe Engineering, Inc., February 2020, which is included as Appendix J of this Draft EIR.

2. Environmental Setting

a. Regulatory Framework

(1) State

(a) California Urban Water Management Planning Act (California Water Code Sections 10610–10656)

The California Urban Water Management Planning Act (California Water Code, Sections 10610–10656) addresses several state policies regarding water conservation and development of water management plans to ensure that adequate supplies are available to meet existing and future demands. The California Urban Water Management Planning Act also requires water suppliers to develop water management plans every five years to identify short-term and long-term demand management measures to meet growing water demands during normal, single-dry, and multiple-dry years. Specifically, municipal water suppliers that serve more than 3,000 customers or provide more than 3,000 acre-feet per year (AFY) of water must adopt an urban water management plan every five years.[1]

[1] *LADWP, 2015 Urban Water Management Plan, April 2016.*

A number of recent requirements regarding preparation of water management plans have been added to the Urban Water Management Planning Act. These additional requirements include: (i) a narrative description of water demand measures implemented over the past five years and future measures planned to meet 20 percent demand reduction targets by 2020; (ii) a standard methodology for calculating system water loss; (iii) a voluntary reporting of passive conservation savings, energy intensity, and climate change; and (iv) an analysis of water features that are artificially supplied with water.[2]

(b) Senate Bill X7-7 (California Water Code Section 10608)

Senate Bill (SB) X7-7 (Water Conservation Act of 2009), codified in California Water Code Section 10608, requires all water suppliers to increase water use efficiency. Enacted in 2009, this legislation includes the setting of an overall goal of reducing per capita urban water use, compared to 2009 levels, by 20 percent by December 31, 2020. The state was required to make incremental progress towards this goal by reducing per capita water use by at least 10 percent on or before December 31, 2015. Monthly statewide potable water savings reached 13.3 percent in January 2019 as compared to production in January 2013.[3]

(c) Senate Bill 610 (California Water Code Sections 10910 et seq.)

SB 610, codified in the California Water Code Sections 10910 et seq., became effective January 1, 2002. SB 610 requires counties and cities to consider the availability of adequate water supplies for certain new large development projects as part of the California Environmental Quality Act (CEQA) process. Specifically, SB 610 requires that for certain projects subject to CEQA, the urban water supplier must prepare a Water Supply Assessment (WSA) that determines whether the projected water demand associated with a project is included as part of the most recently adopted urban water management plan. The WSA shall identify existing water supply entitlements, water rights, or water service contracts held by the public water system, and prior years' water deliveries received by the public water system. In addition, it must address water supplies over a 20-year future period and consider average, single-dry, and multiple-dry years. In accordance with Water Code Section 10912, projects subject to CEQA requiring preparation of a WSA include the following:

- Residential developments of more than 500 dwelling units;

[2] *California Water Code, Section 10631.*

[3] *SWRCB, Fact Sheet, January 2019 Statewide Conservation Data.*

- Shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- Commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- Hotels, motels, or both, having more than 500 rooms;
- Industrial, manufacturing, or processing plant, or industrial park of more than 40 acres of land, more than 650,000 square feet of floor area, or employing more than 1,000 persons;
- Mixed-use projects that include one or more of the above-identified categories; or
- A project that would demand an amount of water equivalent to or greater than the amount of water required by a 500-dwelling unit project.

The WSA must be approved by the public water system at a regular or special meeting and must be incorporated into the CEQA document. The lead agency must then make certain findings related to water supply based on the WSA.

As discussed in Section II, Project Description, of this Draft EIR, the Project would construct 192 senior housing residential units, including 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms. Therefore, the Project does not meet any of the project thresholds above and the preparation and approval of a WSA by LADWP is not required.

(d) Senate Bill 606 and Assembly Bill 1668

On May 31, 2018, Governor Edmund G. "Jerry" Brown (Governor Brown) signed SB 606 and Assembly Bill (AB) 1668 into law.[4] The pair of bills sets permanent overall targets for indoor and outdoor water consumption. The bills set an initial limit for indoor water use of 55 gallons per person per day in 2022, dropping to 50 gallons per person per day by 2030. The Department of Water Resources (DWR) and the State Water Resources Control Board (SWRCB) will recommend standards for outdoor use by October 2021.

(e) California Plumbing Code

Title 24, Part 5 of the California Code of Regulations (CCR) establishes the California Plumbing Code. The California Plumbing Code sets forth efficiency standards

[4] *Office of Edmund G. Brown, Jr., "Governor Brown Signs Legislation Establishing Statewide Water Efficiency Goals," May 31, 2018.*

(i.e., maximum flow rates) for all new federally-regulated plumbing fittings and fixtures, including showerheads and lavatory faucets. The 2019 California Plumbing Code, which is based on the 2018 Uniform Plumbing Code, has been published by the California Building Standards Commission and went into effect on January 1, 2020.

(f) Sustainable Groundwater Management Act of 2014

The Sustainable Groundwater Management Act of 2014, passed in September 2014, is a comprehensive three-bill package that provides a framework for the sustainable management of groundwater supplies by local authorities.[5,6] The Sustainable Groundwater Management Act requires the formation of local groundwater sustainability agencies to assess local water basin conditions and adopt locally based management plans. Local Groundwater Sustainability Agencies (GSAs) were required to be formed by June 30, 2017.

Under Water Code Section 10720.7, groundwater sustainability agencies responsible for high- and medium-priority basins that are subject to critical conditions of overdraft must adopt groundwater sustainability plans by January 31, 2020. Plans for high- and medium-priority basins that are not in critical overdraft must be adopted by January 31, 2022. The Sustainable Groundwater Management Act provides 20 years for groundwater sustainability agencies to implement plans and achieve long-term groundwater sustainability, and protect existing surface water and groundwater rights. The Sustainable Groundwater Management Act provides local groundwater sustainability agencies with the authority to require registration of groundwater wells, measure and manage extractions, require reports and assess fees, and request revisions of basin boundaries, including establishing new sub-basins. To date, no groundwater sustainability agency has been formed for the Coastal Plain of Los Angeles Groundwater Basin, which includes the Project Site.[7]

As required by the Sustainable Groundwater Management Act, in December 2016, the California Department of Water Resources (DWR) published on its website the best management practices (BMPs) for sustainably managing groundwater.

- BMP 1. Monitoring Protocols, Standards, and Sites;
- BMP 2. Monitoring Networks and Identification of Data Gaps;

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[5] *Sustainable Groundwater Management Act [And Related Statutory Provisions from SB 1168 (Pavley), AB 1739 (Dickinson), and SB 1319 (Pavley) as Chaptered], 2015 Amendments, effective January 1, 2016.*

[6] *DWR, SGM Sustainable Groundwater Management, www.water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management, accessed January 15, 2021.*

[7] *California Department of Water Resources, SGMA Portal, All Posted GSA Notices, https://sgma.water.ca.gov/portal/gsa/all, accessed December 11, 2020.*

- BMP 3. Hydrogeologic Conceptual Model;
- BMP 4. Water Budget; and
- BMP 5. Modeling.[8]

In November 2017, BMP 6 for Sustainable Management Criteria was released for a public comment period, which closed on January 8, 2018. As of December 2020, BMP 6 is still in draft form.[9] Furthermore, under Section 10720.7 of the Sustainable Groundwater Management Act, groundwater sustainability agencies responsible for high- and medium-priority basins must adopt groundwater sustainability plans by January 31, 2020, or January 31, 2022, depending on whether the basin is in critical overdraft. The Coastal Plain of Los Angeles Groundwater Basin, which includes the Project Site, is not currently in critical overdraft; therefore, no groundwater sustainability plan has been adopted.

(g) Article 22.5 Drought Emergency Water Conservation, California Code of Regulations (Emergency Declaration and Executive Orders)

In response to California's drought conditions, Governor Brown issued numerous Executive Orders regarding water conservation. Executive Order B-37-16, which was issued in May 2016, extended the mandatory water reduction measures outlined in a previous Executive Order B-29-15 and further directed the DWR and the State Water Resources Control Board (SWRCB) to develop long term efficiency targets that go beyond the 20 percent reductions mandated by SB X7-7, discussed above. The executive order also establishes longer-term water conservation measures that include permanent monthly water use reporting, new urban water use targets, reducing system leaks and eliminating wasteful practices, strengthening urban drought contingency plans and improving agricultural water management and drought plans.

Due to improved hydrologic conditions statewide, on April 7, 2017, Governor Brown issued Executive Order B-40-17 lifting the drought emergency in all but four California counties.[10] Executive Order B-40-17 also rescinds the Drought Emergency Proclamations issued in January and April 2014 as well as four drought-related Executive Orders issued in 2014 and 2015. However, Executive Order B-40-17 also directs the SWRCB to maintain

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[8] *DWR, Best Management Practices, www.water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents, accessed December 11, 2020.*

[9] *DWR, Best Management Practices, www.water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents, accessed December 11, 2020.*

[10] *The Counties of Fresno, Kings, Tulare, and Tuolumne remain under a drought state of emergency, per Executive Order B-40-17.*

urban water use reporting requirements and prohibitions on wasteful practices, including watering during rainfall, hosing off sidewalks, and irrigating ornamental turf on public street medians. Water agencies will continue to strengthen drought readiness and water use efficiency.[11] The regulatory requirements resulting from the existing Executive Orders have been codified in Article 22.5, Drought Emergency Water Conservation, of the California Code of Regulations.

(h) California Water Plan[12]

Required by Water Code Section 10005(a), the California Water Plan is the State's strategic plan for managing and developing water resources statewide for current and future generations. It provides a collaborative planning framework for elected officials, agencies, tribes, water and resource managers, businesses, academia, stakeholders, and the public to develop findings and recommendations and make informed decisions for California's water future.

Updated every five years, the plan presents the status and trends of California's water-dependent natural resources, water supplies, and agricultural, urban, and environmental water demands for a range of plausible future scenarios. The California Water Plan also evaluates coordinated efforts of regional and statewide resource management strategies to reduce water demand, increase water supply, reduce flood risk, improve water quality, and enhance environmental and resource stewardship. The evaluations and assessments thus help identify effective actions and policies for meeting California's resource management objectives in both short term and long term of future decades. While the California Water Plan cannot mandate actions or authorize itemized spending, policy-makers and lawmakers have the ability to authorize specific actions and appropriate necessary funding. Released in July 2019, the California Water Plan Update 2018 recommends 19 priority actions to improve integrated watershed management; strengthen infrastructure resiliency; restore ecosystem functions; empower under-represented communities; improve inter-agency alignment; address regulatory challenges; and support decision-making, adaptive management, and long-term planning.[13] The California Water Plan Update will work in tandem with the California Water Action Plan, as discussed further below.

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[11] *Governor Brown Lifts Drought Emergency, Retains Prohibition on Wasteful Practices, Executive Order B-40-17.*

[12] *DWR, About the Water Plan, https://water.ca.gov/Programs/California-Water-Plan, accessed December 11, 2020.*

[13] *DWR, DWR Released Final California Water Plan Update 2018, published July 16, 2019, https://water.ca.gov/News/News-Releases/2019/July-19/Final-Water-Plan-Update-2018, accessed December 11, 2020.*

(i) California Water Action Plan

The first California Water Action Plan (Action Plan), issued by Governor Brown in January 2014 and updated in 2016, provides a roadmap for the State's path toward sustainable water management.[14] The Action Plan discusses the challenges for managing the State's water resources supply, scarcity, and quality, and also considers the effects of ecosystems, flooding, population growth, and climate change and floods. The following ten actions were presented:[15]

1. Make conservation a California way of life;
2. Increase regional self-reliance and integrated water management across all levels of government;
3. Achieve the co-equal goals for the Delta;
4. Protect and restore important ecosystems;
5. Manage and prepare for dry periods;
6. Expand water storage capacity and improve groundwater management;
7. Provide safe water for all communities;
8. Increase flood protection;
9. Increase operational and regulatory efficiency; and
10. Identify sustainable and integrated financing opportunities.

In complementing local efforts, the Action Plan emphasizes collaboration between different levels of government, water agencies, conservationists, tribes, farmers, and other stakeholders. Since the release of the Action Plan Update for 2016, its implementation progress has also been documented with focuses on policy, funding, and coordinated projects. The Action Plan will continue to be implemented simultaneously with the California Water Plan Update 2018.

[14] *California Department of Natural Resources, California Water Action Plan 2016 Update.*

[15] *California Department of Natural Resources, California Water Action Plan 2014.*

(2) Regional

As discussed in detail below, the Metropolitan Water District of Southern California (MWD) is a primary source of water supply within Southern California. MWD imports a portion of its water supplies from Northern California through the State Water Project's California Aqueduct, and from the Colorado River through MWD's own Colorado River Aqueduct. LADWP is a member agency and purchases supplemental water from MWD in addition to the supplies from local groundwater and the Los Angeles Aqueduct.

Based on the water supply planning requirements imposed on its member agencies and ultimate customers, MWD has adopted a series of official reports on the state of its water supplies. As described in further detail below, in response to recent developments in the Sacramento Delta, MWD has developed plans intended to provide solutions that, when combined with the rest of its supply portfolio, will ensure a reliable long-term water supply for its member agencies, including the LADWP.

(a) MWD's Integrated Water Resources Plan

MWD first adopted its Integrated Water Resources Plan (IRP) in 1996. The MWD's IRP is updated every five years. The goal of the MWD's IRP is for Southern California to have a reliable water system that extends to the future. The MWD's 2015 IRP Update, adopted in January 2016, provides MWD's strategy for water resource reliability through the year 2040. The IRP represents MWD's long-term plan to assure adequate water supplies for Southern California, whereas MWD's 2015 Urban Water Management Plan (UWMP), discussed in more detail below, describes and evaluates sources of supply, efficient uses, water recycling and conservation activities.

The MWD's 2015 IRP Update calls for stabilizing and maintaining imported water supplies; meeting future growth through increased water conservation and sustaining and developing new local supplies; pursuing a comprehensive transfers and exchanges strategy; building storage in wet and normal years to manage risks and drought; and preparing for uncertainty with Future Supply Actions. Overall, the strategies presented in MWD's 2015 IRP Update include investments to maintain the reliability of imported water supplies, expansion of local water supplies, and reduction in water demand through a variety of conservation and water use efficiency initiatives.[16]

[16] *MWD, Integrated Water Resources Plan 2015 Update, January 2016.*

(b) MWD's 2015 Urban Water Management Plan

MWD's 2015 UWMP addresses the future of MWD's water supplies and demand through the year 2040.[17] Based on its 2015 UWMP, MWD has supply capabilities that would be sufficient to meet expected demands from 2020 through 2040 under single dry-year and multiple dry-year hydrologic conditions. MWD has comprehensive plans for stages of actions it would undertake to address up to a 50-percent reduction in its water supplies and a catastrophic interruption in water supplies through its Water Surplus and Drought Management and Water Supply Allocation Plans. MWD has also developed an Emergency Storage Requirement to mitigate against potential interruption in water supplies resulting from catastrophic occurrences within the Southern California region and is working with the State to implement a comprehensive improvement plan to address catastrophic occurrences that could occur outside of the Southern California region. MWD is also working with the State on the Delta Risk Management Strategy to reduce the impacts of a seismic event in the Delta that would cause levee failure and disruption of State Water Project deliveries. In addition, MWD has plans for supply implementation and continued development of a diversified resource mix including programs in the Colorado River Aqueduct, State Water Project, Central Valley transfers, local resource projects, and in-region storage that enables the region to meet its water supply needs. As set forth in the 2015 UWMP, MWD will also continue investments in water use efficiency measures to help the region achieve the 20 percent per person potable water use reduction by 2020.

(c) MWD's Water Surplus and Drought Management Plan

In 1999, MWD incorporated the water shortage contingency analysis that is required as part of any urban water management plan into a separate, more detailed plan, called the Water Surplus and Drought Management Plan. The overall objective of the Water Surplus and Drought Management Plan is to ensure that shortage allocation of MWD's imported water supplies is not required.[18] The Water Surplus and Drought Management Plan provides policy guidance to manage MWD's supplies and achieve the goals laid out in the agency's IRP. The Water Surplus and Drought Management Plan separates resource actions into two major categories: Surplus Actions and Shortage Actions. The Water Surplus and Drought Management Plan considers the region to be in surplus only after MWD has met all demands for water, including replenishment deliveries. The Surplus Actions store surplus water, first inside and then outside of the region. The Shortage Actions of the Water Surplus and Drought Management Plan are separated into three subcategories: Shortage, Severe Shortage, and Extreme Shortage. Each category has associated actions that could be taken as a part of the response to prevailing shortage

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[17] *MWD, 2015 Urban Water Management Plan, June 2016.*

[18] *MWD, Water Surplus and Drought Management Plan: Report No. 1150, August 1999.*

conditions. Conservation and water efficiency programs are part of MWD's resource management strategy through all categories.

(d) MWD's Water Supply Allocation Plan

While the Water Surplus and Drought Management Plan included a set of general actions and considerations for MWD staff to address during shortage conditions, it did not include a detailed water supply allocation plan or implementation approach. Therefore, MWD adopted a water supply plan called the *Water Supply Allocation Plan* in February 2008, that has since been implemented three times, most recently in April 2015. The Water Supply Allocation Plan includes a formula for determining reductions of water deliveries to member agencies during extreme water shortages in MWD's service area conditions (i.e., drought conditions or unforeseen cuts in water supplies). The formula allocates shortages of MWD supplies and seeks to balance the impacts of a shortage at the retail level while maintaining equity on the wholesale level, and takes into account growth, local investments, changes in supply conditions and the demand hardening aspects of non-potable recycled water use and the implementation of conservation savings programs. The allocation period covers 12 consecutive months from July of a given year through the following June.

(3) Local

(a) Los Angeles Department of Water and Power's 2015 Urban Water Management Plan

The City is required to adopt an UWMP every five years. In June 2016, LADWP adopted its 2015 Urban Water Management Plan (2015 LADWP UWMP), which is based on a 25 year planning horizon through 2040. The 2015 LADWP UWMP serves two purposes: (i) achieve full compliance with the requirements of California's Urban Water Management Planning Act (discussed above); and (ii) serve as a master plan for water supply and resource management consistent with the City's goals and objectives.[19]

A number of important changes occurred since the LADWP prepared its 2010 UWMP. The year 2012 marked the start of a multi-year drought in California, in response to which Governor Brown proclaimed a drought state of emergency in January 2014. In addition, as discussed above, in 2014, the SWRCB implemented its Drought Emergency Water Conservation Regulation, which mandates 25-percent reductions in water use statewide. In October 2014, City of Los Angeles Mayor Eric Garcetti issued Executive Directive No. 5 (ED 5), which set goals to reduce per capita water use, reduce purchases of imported potable water by 50 percent, and create an integrated water strategy to

[19] *LADWP, 2015 Urban Water Management Plan, June 2016.*

increase local supplies and improve water security considering climate change and seismic vulnerability. In addition, in April 2015, Mayor Garcetti released the first Sustainable City pLAn (discussed further below), establishing targets for the City that strengthen and promote sustainability throughout the year 2035. The 2019 L.A.'s New Green Deal, also discussed below, expands on the vision of the Sustainable City pLAn. The 2015 LADWP UWMP incorporates the objectives of these recent initiatives.

(b) Sustainable City pLAn and L.A.'s Green New Deal

The City's first Sustainable City pLAn released in April 2015 includes a multi-faceted approach to developing a locally sustainable water supply to reduce reliance on imported water, reducing water use through conservation, and increasing local water supply and availability.

In 2019, the first four-year update to the 2015 Sustainable City pLAn was released. This updated document, known as L.A.'s Green New Deal, expands upon the City's vision for a sustainable future and provides accelerated targets and new goals.[20] L.A.'s Green New Deal focuses on environmental justice, renewable energy, local water, clean and healthy buildings, housing and development, mobility and public transit, zero emission vehicles, industrial emissions and air quality monitoring, waste and resource recovery, food systems, urban ecosystems and resilience, and green jobs. In addition, all targets have been aligned with the United Nations Sustainable Development Goals.

L.A.'s Green New Deal provides the following targets related to local water in the City:

- Source 70 percent of L.A.'s water locally and capture 150,000 AFY of stormwater by 2035.
- Recycle 100 percent of all wastewater for beneficial reuse by 2035.
- Build at least 10 new multi-benefit stormwater capture projects by 2025; 100 by 2035; and 200 by 2050.
- Reduce potable water use per capita by 22.5 percent by 2025; and 25 percent by 2035; and maintain or reduce 2035 per capita water use through 2050.
- Install or refurbish hydration stations at 200 sites, prioritizing municipally-owned buildings and public properties such as parks, by 2035.

[20] *City of Los Angeles, L.A.'s Green New Deal, Sustainable City pLAn, 2019.*

L.A.'s Green New Deal also provides specific milestones and initiatives to meet such targets.

(c) Resilient Los Angeles

In March 2018, the Mayor's office in partnership with 100 Resilient Cities[21] released the Resilient Los Angeles Plan, which includes strategies to fortify the City's infrastructure, protect its economy, and make Los Angeles safer.[22] Goal 11, *Restore, Rebuild, and Modernize Los Angeles' Infrastructure*, includes measures related to water supply. Specific goals include, but are not limited to, expanding the City's seismic resilient pipe network, replacing aging infrastructure, and expanding and protecting water sources to reduce dependence on imported water and strengthen the City's local water supply.

(d) One Water LA 2040 Plan

The One Water LA 2040 Plan (One Water LA) is an initiative that builds on the progress of the City's Integrated Resources Plan. One Water LA extends the City's IRP planning period from 2020 to year 2040 and takes into consideration an additional emphasis on environmental, social, and sustainability factors.[23] One Water LA is a collaborative approach to develop an integrated framework for managing the City's watersheds, water resources, and water facilities in an environmentally, economically, and socially beneficial manner. One Water LA objectives include the following:[24]

1. Integrate management of water resources and policies by increasing coordination and cooperation between all City departments, partners and stakeholders.

2. Balance environmental, economic and societal goals by implementing affordable and equitable projects and programs that provide multiple benefits to all communities.

3. Improve health of local watersheds by reducing impervious cover, restoring ecosystems, decreasing pollutants in our waterways and mitigating local flood impacts.

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[21] *Pioneered by the Rockefeller Foundation, 100 Resilient Cities is dedicated to helping cities around the world become more resilient to the physical, social and economic challenges that are a growing part of the 21st century.*

[22] *City of Los Angeles, Resilient Los Angeles, March 2018.*

[23] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[24] *LASAN, About One Water LA, www.lacitysan.org/san/faces/home/portal/s-lsh-es/s-lsh-es-owla/s-lsh-es-owla-au?_adf.ctrl-state=16okwrlh8h_5&_afrLoop=510921480353498#!, accessed December 11, 2020.*

4. Improve local water supply reliability by increasing capture of stormwater, conserving potable water and expanding water reuse.

5. Implement, monitor and maintain a reliable wastewater system that safely conveys, treats and reuses wastewater while also reducing sewer overflows and odors.

6. Increase climate resilience by planning for climate change mitigation and adaptation strategies in all City actions.

7. Increase community awareness and advocacy for sustainable water by active engagement, public outreach and education.

(e) Los Angeles Municipal Code

The City has adopted several ordinances in the Los Angeles Municipal Code (LAMC), in an effort to reduce water consumption. A summary of the City's key regulations regarding water conservation is provided below.

- City Ordinance Nos. 166,080, 181,288, 183,608, and 184,250—amending LAMC Chapter XII, Article 1 to clarify prohibited uses of water and modify certain water conservation requirements of the City's Emergency Water Conservation Plan. The City's Emergency Water Conservation Plan sets forth six different phases of water conservation, which shall be implemented based on water conditions. As part of these requirements, watering is limited to specific days and hours.[25] In determining which phase of water conservation shall be implemented, LADWP monitors and evaluates the projected water supply and demand. In addition, the Emergency Water Conservation Plan includes penalties for those that violate its requirements.

- City Ordinance No. 180,822—amended LAMC Chapter XII, Article 5 to establish water efficiency requirements for new development and renovation of existing buildings, and mandate installation of high efficiency plumbing fixtures in residential and commercial buildings.

- City Ordinance No. 181,480—amended LAMC Chapter IX by adding Article 9 (Green Building Code) to the LAMC to incorporate various provisions of the California Green Building Standards Code. This ordinance added mandatory measures for newly constructed low-rise residential and non-residential buildings to reduce indoor water use by at least 20 percent by: (1) using water saving

[25] *Ordinance applies to any person(s), association, corporation or governmental agency supplied/entitled to be supplied with water service by the Department.*

fixtures or flow restrictions; and/or (2) demonstrating a 20-percent reduction in baseline water use.

- City Ordinance Nos. 181,899 and 183,833—amended LAMC Chapter VI, Article 4.4, Section 64.72 regarding stormwater and urban runoff to include new requirements, including Low Impact Development (LID) requirements that promote water conservation.

- City Ordinance No. 182,849—amended LAMC Chapter IX, Article 9 (Green Building Code) to mandate that for new water service or for additions or alterations requiring upgraded water service for landscaped areas of at least 1,000 square feet, separate sub-meters or metering devices shall be installed for outdoor potable water use. This ordinance also required that for new non-residential construction with at least 1,000 square feet of cumulative landscaped area, weather- or soil moisture-based irrigation controllers and sensors be installed.

- City Ordinance No. 186,692—amended LAMC Chapter IX, Article 4 (Los Angeles Plumbing Code) by adopting by reference various sections of the 2019 California Plumbing Code, with amendments. This ordinance also added requirements for plumbing fixtures and fixture fitting.

- City Ordinance No. 184,248—amended LAMC Chapter IX, Article 4 (Plumbing Code) and Article 9 (Green Building Code) to establish citywide water efficiency standards and mandate a number of new fixture requirements and methods of construction for plumbing and irrigation systems.

The City of Los Angeles also has adopted numerous requirements related to the provision of water for purposes of fire protection. These requirements are set forth in the Fire Code (LAMC Chapter V, Article 7). LAMC Section 57.507.3.1 establishes fire water flow standards. Fire water flow requirements, as determined by the Los Angeles Fire Department (LAFD), vary by project site as they are dependent on land use (e.g., higher intensity land uses require higher flow from a greater number of hydrants), life hazard, occupancy, and fire hazard level. As set forth in LAMC Section 57.507.3.1, fire water flow requirements vary from 2,000 gallons per minute (gpm) in low density residential areas to 12,000 gpm in high density commercial or industrial areas. A minimum residual water pressure of 20 pounds per square inch (psi) is to remain in the water system with the required gpm flowing. As discussed in Section IV.H.1, Public Services—Fire Protection, of this Draft EIR, as determined by the LAFD, the required fire flow for the Project has been set at 6,000 gpm to 9,000 gpm from four to six hydrants flowing simultaneously with a minimum residual water pressure of 20 psi, which translates to 1,500 gpm per hydrant.

(f) Los Angeles Water Rate Ordinance

The City's Water Rate Ordinance was adopted in June 1995 and last amended in 2016 by the City's Board of Water and Power Commissioners pursuant to Ordinance No. 184,130. Effective since April 15, 2016, this City Water Rate Ordinance restructured water rates to help further promote conservation. Specifically, the goal of the ordinance is to incentivize water conservation while recovering the higher costs of providing water to high volume users and accelerating development of sustainable local water supply. Water rate schedules were established for: single-dwelling unit customers; multi-dwelling unit customers; commercial, industrial, and governmental customers and temporary construction; recycled water service; private water service; publicly-sponsored irrigation, recreational, agricultural, horticultural, and floricultural uses, community gardens and youth sports. The new water rate structure increases the number of tiers from two to four for single-dwelling unit customers. In addition, this ordinance intends to maintain cost-of-service principles, incremental tier pricing based on the cost of water supply and added pumping and storage costs.

(g) LADWP 2018–19 Water Infrastructure Plan[26]

The LADWP 2018–19 Water Infrastructure Plan, revised November 2019, includes infrastructure upgrades that are a part of the $6.3 billion five-year Water System capital plan. This updated document builds upon the progress of LADWP's 2017–19 Water Infrastructure Plan and provides accelerated targets and new goals. The main elements of the Water Infrastructure Plan include the replacement of distribution mainlines, trunk lines, large valves, and water meters, as well as ongoing maintenance and rehabilitation of facilities such as pump stations, pressure regulators, and in-city reservoirs and tanks.

b. Existing Conditions

(1) Water Supply

LADWP is responsible for providing water within the City of Los Angeles limits and ensuring that the water quality meets applicable California health standards for drinking water. As the Project Site is located within the City, LADWP is the water provider for the Project Site. Water is supplied to the City from four primary sources: the Los Angeles Aqueducts, local groundwater, purchased water from MWD, and recycled water.[27] As shown in Table IV.K.1-1 on page IV.K.1-16, in 2018, the most recent year for which data is available, LADWP had an available water supply of 511,517 acre-feet. LADWP water sources are described in further detail below.

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[26] *LADWP, 2018-19 Water Infrastructure Plan, revised November 2019.*

[27] *LADWP, Water Supply Assessment—8th, Grand, and Hope Project, November 19, 2019.*

Table IV.K.1-1
LADWP 2007–2018 Water Supply

Calendar Year	Los Angeles Aqueducts	Local Groundwater	MWD	Recycled Water	Transfer, Spread, Spills, and Storage	Total[a]
2007	127,392	88,041	439,353	3,595	**57**	**658,438**
2008	148,407	64,604	427,422	7,048	**-1,664**	**645,817**
2009	137,261	66,998	351,959	7,570	**-554**	**563,234**
2010	251,126	68,346	205,240	6,900	**938**	**532,550**
2011	357,752	49,915	119,481	7,708	**153**	**535,009**
2012	166,858	59,109	326,122	5,965	**-1,182**	**556,872**
2013	64,690	66,272	438,534	9,253	**2,404**	**581,153**
2014	63,960	96,394	391,307	11,307	**-2,020**	**560,948**
2015	33,244	80,155	378,539	9,829	**-430**	**501,337**
2016	95,573	72,503	314,336	9,095	**981**	**492,487**
2017	380,329	14,695	113,033	8,509	**-5,730**	**510,835**
2018 [b]	245,941	43,100	214,940	8,795	**-1,259**	**511,517**

Units are in acre-feet.

[a] *The figures presented account for the transfer, spread, spill, and storage of the water supply as determined by LADWP.*

[b] *2018 water supply data are estimated.*

Source: LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019, Table III.

(a) Los Angeles Aqueducts

Snowmelt runoff from the Eastern Sierra Nevada Mountains is collected and conveyed to the City via the Los Angeles Aqueducts. The Los Angeles Aqueducts' supplies come primarily from snowmelt and secondarily from groundwater pumping, and can fluctuate yearly due to the varying hydrologic conditions. The City holds water rights in the Eastern Sierra Nevada where the Los Angeles Aqueducts' water supplies originate. These supplies originate from both streams and groundwater. As indicated in Table IV.K.1-1, approximately 245,941 acre-feet of LADWP's water supplies were from the Los Angeles Aqueducts in 2018.

According to LADWP, average deliveries from the Los Angeles Aqueducts system from Fiscal Year (FY) 2011/2012 through FY 2015/2016 were approximately 111,293 acre-feet of water annually.[28] During this period, the record low snowpack for Los

[28] *LADWP, Water Supply Assessment—8th, Grand, and Hope Project, November 19, 2019.*

Angeles Aqueducts watershed in the Eastern Sierra Nevada Mountains was recorded on April 1, 2015. Supply conditions have changed drastically since 2015. Snowpack in the Eastern Sierra Nevada Mountains was at 100 percent of an average year on April 1, 2020.[29]

Various lawsuits and injunctions, and resulting agreements affect water supplies from the Los Angeles Aqueduct. These include an agreement with the County of Inyo regarding groundwater levels and enhancement and mitigation projects in the Owens Valley, and the imposition of new regulatory requirements by the SWRCB regarding export from Mono Lake and restoration and monitoring programs for the Mono Basin. In addition, in November 2014, an agreement between the City and the Great Basin Unified Air Pollution Control District was reached wherein LADWP will continue to implement measures to address dust emissions at Owens Lake and implement additional water conservation through increasing use of water efficient and waterless dust measures. Upon completion of the Phase 9/10 Project on December 31, 2017, LADWP had mitigated dust emissions from 48.6 square-miles of Owens Lake. Based on the agreement, the Great Basin Unified Air Pollution Control District's potential future dust mitigation orders to LADWP cannot exceed an additional 4.8 square miles. As a result, LADWP expects to save significant amounts of water over the next 10 years with implementation of the Owens Lake Master Project and other water conservation projects.[30]

Based on historical hydrological conditions from FY 1961/1962 to FY 2010/2011 LADWP projects that the average annual long-term Los Angeles Aqueducts delivery between 2015 and 2040 is expected to be approximately 278,000 acre-feet per year (AFY) and gradually decline to 267,000 AFY due to projected climate change impacts.[31] However, with completion of the Owens Lake Master Project by 2024, the projected Los Angeles Aqueducts delivery may increase to 286,000 AFY due to water conserved at Owens Lake, which would off-set most of the anticipated long-term losses.[32]

(b) Groundwater

LADWP pumps groundwater from three adjudicated basins, including the San Fernando, Sylmar, and Central Basins. LADWP has accumulated 523,529 acre-feet of stored water credits in the San Fernando Basin as of October 1, 2016.[33] This water can be

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[29] *LADWP, Eastern Sierra Snow Survey Results, April 1, 2020.*

[30] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[31] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[32] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[33] *LADWP, Water Supply Assessment—8th, Grand, and Hope Project, November 19, 2019.*

withdrawn from the basin during normal and dry years or in an emergency, in addition to LADWP's approximately 87,000 AFY entitlement in the basin. The City's current annual entitlements also include 3,570 AFY from the Sylmar Basin and 17,236 AFY from the Central Basin.

As shown in Table IV.K.1-2 on page IV.K.1-19, during the FY 2017/18 (July through June), LADWP extracted 22,259 acre-feet from the San Fernando Basin and 0.77 acre-feet from the Central Basin.[34] LADWP plans to continue production from its groundwater basins in the coming years to offset reductions in imported water supplies. Extraction from the basins will, however, be limited by water quality and overdraft protection. Both LADWP and DWR have programs in place to monitor wells to prevent overdrafting. LADWP's groundwater pumping practice is based on a "safe yield" operation. Furthermore, basin management is achieved by collective efforts of a court-appointed Watermaster and the Upper Los Angeles River Area (ULARA) Administrative Committee of representatives from five public water supply agencies overlying the ULARA Basins.[35] These efforts include operation of groundwater remediation systems, use of an extensive network of groundwater monitoring wells, routine reporting on groundwater elevation and water quality, management and mitigation of urban runoff water quality, and development of enhanced stormwater recharge and groundwater replenishment.

(c) Metropolitan Water District of Southern California

MWD is the largest water wholesaler for domestic and municipal uses in Southern California. MWD imports a portion of its water supplies from Northern California through the State Water Project's California Aqueduct and from the Colorado River through MWD's own Colorado River Aqueduct. As one of the 26 member agencies of MWD, LADWP purchases water from MWD to supplement LADWP water supplies from the Los Angeles Aqueducts and local groundwater. As of June 30, 2017, LADWP has a preferential right to purchase 18.51 percent of MWD's total water supply.[36]

The Sustainable City pLAn, discussed above, calls for a reduction in purchased imported water by 50 percent by 2025 from the Fiscal Year 2013-2014 level, which was approximately 441,870 acre-feet.[37] L.A.'s Green New Deal also reaffirms this initiative.[38] To meet these targets, LADWP plans to increase conservation, enhance the ability for

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[34] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[35] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[36] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[37] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[38] *City of Los Angeles, L.A.'s Green New Deal, Sustainable City pLAn, 2019.*

Table IV.K.1-2
Local Groundwater Basin Supply

Fiscal Year (July-June)	San Fernando Basin	Sylmar Basin	Central Basin
2014–2015	80,097	1	6,948
2015–2016	75,958	683	8,395
2016–2017	55,116	0	3,005
2017–2018	22,259	0	0.77
2019–2020*	90,000	4,170	18,500
2024–2025*	88,000	4,170	18,500
2029–2030*	84,000	4,170	18,500
2034–2035*	92,000	4,170	18,500
2039–2040*	92,000	3,570	18,500

Units are in acre-feet.

[a] *Projected production from 2015 UWMP.*

Source: LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.

groundwater pumping through increased stormwater capture projects and groundwater replenishment with highly treated recycled water as well as remediation of contaminated groundwater supplies in the San Fernando Basin. LADWP also plans to increase recycled water use for non-potable purposes. With these initiatives and under average hydrologic conditions, LADWP's 2015 UWMP projects MWD purchases to be approximately 65,930 AFY in 2025.[39]

Through continued and additional local supply development and conservation savings, LADWP's reliance on MWD water supplies may be reduced significantly from the five-year average from Fiscal Years 2010–2011 through 2014–2015 of 57 percent of total demand to 11 percent under average weather conditions and to 44 percent under single-dry year conditions by fiscal year 2040.[40] As indicated in Table IV.K.1-1 on page IV.K.1-16, LADWP received approximately 214,940 acre-feet of water from MWD in 2018, which was a reduction from previous years. Summaries of MWD's individual supplies, along with each supply's challenges and specific responsive actions taken by MWD, are presented below.

[39] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[40] *LADWP, 2015 Urban Water Management Plan, April 2016.*

(i) State Water Project

MWD imports water from the State Water Project, owned by the State of California and operated by DWR. The State Water Project is a water storage and delivery system of pump stations, reservoirs, aqueducts, tunnels, and power plants. The main purpose of the State Water Project is to divert and store surplus water during wet periods and distribute it to areas throughout the State. Other purposes of the State Water Project include flood control, power generation, recreation, fish and wildlife protection, and water quality management in the Sacramento–San Joaquin River Delta. The State Water Project transports Feather River water stored in and released from Oroville Dam and conveyed through the Bay-Delta, as well as unregulated flows diverted directly from the Bay-Delta south via the California Aqueduct to four delivery points near the northern and eastern boundaries of MWD's service area.

MWD is one of the 29 agencies that have long-term contracts for water service from DWR, and is the largest agency in terms of the number of people it serves (approximately 18.8 million), the share of the State Water Project that it has contracted to receive (approximately 46 percent), and the percentage of total annual payments made to DWR by agencies with State water contracts (approximately 49 percent for 2018).[41]

The State Water Project, under the original contracted amount at 100 percent allocation, provides MWD with 1,911,500 acre-feet of water each calendar year.[42] However, due to water quality and supply reliability challenges and conflicts from variable hydrology and environmental standards that limit pumping operations, State Water Project deliveries in the most critically dry years have varied. For 2019, DWR allocation levels were initially further reduced to 15 percent in January, but levels were subsequently increased to 35 percent in February and 75 percent in June.[43]

Challenges to State Water Project Supply

Litigation and various regulations have created challenges for the State Water Project. In particular, the listing of several fish species in the Delta as threatened or endangered under the federal and/or California Endangered Species Acts (ESA/CESA) has constrained State Water Project operations and created more uncertainty in State Water Project supply reliability. Based on DWR's 2015 *State Water Project Delivery Capability Report*, future State Water Project deliveries will continue to be impacted by restrictions on

[41] *LADWP, Water Supply Assessment—8th, Grand, and Hope Project, November 19, 2019.*

[42] *LADWP, Water Supply Assessment—8th, Grand, and Hope Project, November 19, 2019.*

[43] *CA DWR, Notice to State Water Project Contractors, Nos. 19-03, 19-06, and 19-10.*

State Water Project and Central Valley Project Delta pumping, and climate change, which is altering the hydrologic conditions in the State.

(ii) The Colorado River

MWD owns and operates the Colorado River Aqueduct, which has delivered water from the Colorado River to Southern California since 1942.[44] The Colorado River currently supplies approximately 17 percent of Southern California's water needs, and on average makes up about 15 percent of LADWP's purchases from MWD.[45] MWD has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. California is apportioned the use of 4.4 million acre-feet of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in Arizona, California, and Nevada.[46] In addition, California has historically been allowed to use Colorado River water apportioned to, but not used by, Arizona or Nevada. Since 2003, due to increased consumption, no such unused apportioned water has been available to California. Historically, MWD has been able to claim most of its legal entitlement of Colorado River water and could divert over 1.2 million acre-feet in any year, but persistent drought conditions have contributed to a decrease in these claims.[47] MWD's total supply from the Colorado River for Calendar Year 2016 was approximately 985,000 acre-feet.[48] The recent 16-year drought has been so severe that it has resulted in major reductions in water deliveries from the Colorado River. In response, the federal government, states and urban and agricultural water districts that depend on the Colorado River worked together toward a solution. Their efforts resulted in the Drought Contingency Plan adopted and enacted in 2019. The Drought Contingency Plan is a collection of agreements within and among the seven western states in the Colorado River Basin to boost storage levels in Lake Mead and Lake Powell and prevent the reservoirs from reaching critically low levels.

Management of Colorado River Supply

There are various agreements and guidelines that affect the management of Colorado River water supplies, and MWD has taken steps to augment its share of Colorado River water supplies by entering into agreements with other agencies that have rights to use such water.[49] Specifically, under a 1988 water conservation agreement between MWD

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[44] *LADWP, Water Supply Assessment—8th, Grand, and Hope Project, November 19, 2019.*

[45] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[46] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[47] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[48] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[49] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

and the Imperial Irrigation District, MWD provided funding for the Imperial Irrigation District to construct and operate a number of conservation projects that are currently conserving up to 109,460 acre-feet of water per year that is provided to MWD.[50] In addition, in August 2004, MWD and the Palo Verde Irrigation District signed an agreement for a Land Management, Crop Rotation and Water Supply Program, which provides up to 133,000 acre-feet of water to be available to MWD in certain years. Furthermore, in May 2008, MWD joined the Central Arizona Water Conservation District and the Southern Nevada Water Authority in funding of the Warren H. Brock Reservoir, which conserves approximately 70,000 AFY of water. MWD is also participating in numerous pilot programs to augment its water supplies. Other agreements and guidelines that continue to affect the management of water supplies from the Colorado River include the 2003 Quantification Settlement Agreement, signed by the Department of Fish and Game (now known as the California Department of Fish and Wildlife); the Coachella Valley Water District; the Imperial Irrigation District (IID); and the San Diego County Water Authority (SDWCA) and executed in October 2003 as well as the Transfer Agreement, signed by the IID and the SDWCA and executed in 1998. Additional guidelines and programs that influence management of the Colorado River water supplies include the Interim Surplus Guidelines, issued by the Secretary of the Interior; the Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead; the Intentionally Created Surplus Program; and the Quagga Mussel Control Program.

(iii) Additional MWD Actions to Address Supply

To improve water supply reliability for the entire Southern California region, MWD has also been pursuing voluntary water transfer and exchange programs with State, federal, public and private water districts, and individuals. Programs include the Arvin-Edison Storage Program; the Semitropic Storage Program; the San Bernardino Storage Program; the San Gabriel Valley MWD Exchange Program; the Antelope Valley-East Kern Water Agency Exchange and Storage Program; the Kern-Delta Water District Storage Program; the Mojave Storage Program; and the Central Valley Transfer Programs.[51]

In addition, MWD continues to develop plans and make efforts to provide additional water supply reliability for the entire Southern California region. LADWP coordinates closely with MWD to ensure implementation of these water resource development plans.[52] As discussed above, MWD's long-term plans to meet its member agencies' reliability needs include improvements to the State Water Project, conjunctive management efforts on the

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[50] *Metropolitan Water District of Southern California, 2015 Urban Water Management Plan, June 2016.*

[51] *Metropolitan Water District of Southern California, 2015 Urban Water Management Plan, June 2016.*

[52] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

Colorado River, water transfer programs and outdoor conservation measures, and development of additional local resources, such as recycling brackish water desalination and seawater desalination.[53]

Additionally, MWD has more than 5 million acre-feet of storage capacity of available reservoirs and banking/transfer programs, with approximately 2.46 million acre-feet of water in Water Surplus Drought Management storage and an additional 626,000 acre-feet in emergency storage as of January 1, 2018.[54] With implementation of new and modified existing storage programs to manage the available surplus supplies, MWD was able to add storage in 2018 and began 2019 with approximately 2.5 million acre-feet of water in its dry-year storage portfolio. As described in the MWD's 2015 UWMP, MWD has supply capabilities that would be sufficient to meet expected demands from 2020 through 2040 under average-year, single dry-year, and multiple dry-year hydrologic conditions.

(d) Precipitation Conditions

During the 2018 water year (i.e., October 1, 2017, through September 30, 2018), California experienced dry conditions statewide, with nearly all the state experiencing below precipitation and much of Southern California receiving half or less of its average annual precipitation. The 2018 water year followed California's second-wettest year of record as measured by statewide runoff, ending a historic five-year drought.[55] The City of Los Angeles receives an average of 14.77 inches of precipitation per year according to the National Weather Service. As of December 10, 2020, the City had received 0.11 inches of precipitation.[56]

The 2019 water year (i.e., October 1, 2018 to September 30, 2019) ended with significantly more water in storage than the previous year due to above-average snow and precipitation.[57] According to the National Drought Mitigation Center, as of December 31, 2019, 96.43 percent of the state was not in a drought condition, and 3.57 percent of the State was considered abnormally dry.[58] This indicates a shift from the previous year on December 25, 2018, when approximately 92.23 percent of the State was abnormally dry,

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[53] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[54] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[55] *DWR, Water Year 2018: Hot and Dry Conditions Return, October 1, 2018.*

[56] *DWR, Daily Precipitation Stations, Los Angeles/USC, https://cdec.water.ca.gov/dynamicapp/QueryDaily?s=USC, accessed December 11, 2020.*

[57] *DWR, Water Year 2020 Begins with Robust Reservoir Storage, October 1, 2019, https://water.ca.gov/News/News-Releases/2019/October-19/Water-Year-2020-Begins-with-Robust-Reservoir-Storage, accessed December 11, 2020.*

[58] *United States Drought Monitor, State Drought Monitor, California, December 31, 2019.*

75.17 percent was experiencing moderate drought, 16.24 percent was experiencing severe drought, and 2.10 percent was experiencing extreme drought.[59]

California continues to experience variable weather and precipitation, as does the City of Los Angeles with its many periods of dry years and wet years. Thus, the State continues to develop and implement necessary strategies and actions to address future drought conditions and account for year-to-year fluctuations in precipitation.

(e) Global Warming and Climate Change

As discussed in the LADWP's 2015 UWMP, generally speaking, any water supplies that are dependent on natural hydrology are vulnerable to climate change, especially if the water source originates from mountain snowpack. For LADWP, the most vulnerable water sources subject to climate change impacts are imported water supplies from MWD and the Los Angeles Aqueducts, through local sources can also expect to see some changes in the future. In addition to water supply impacts, changes in local temperature and precipitation are expected to alter water demand patterns. However, there is still general uncertainty within the scientific community regarding the potential impacts of climate change within the City. LADWP continues to monitor the latest developments in scientific knowledge and will continue to assess future research for the potential impacts of climate change on its water resources.[60]

MWD and DWR also continue to study climate change and address the implications of climate change on water supplies. MWD has established a technical process to identify key vulnerabilities from various sources, including climate change, in order to provide comprehensive analyses within its Integrated Water Resources Plans. In addition, DWR addresses climate change impacts on water supply in its California Water Plan Updates, which also account for uncertainty, risk, and sustainability in planning for the future.[61] As mentioned above, with updates published every five years, the most recent *California Water Plan Update 2018* built on its predecessor by identifying specific performance tracking metrics, recommending financing methods with stable revenues, and incorporating principles of sustainability.[62]

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[59] *United States Drought Monitor, State Drought Monitor, California, December 25, 2018.*

[60] *LADWP, 2015 Urban Water Management Plan, June 2016, p. 12-1.*

[61] *DWR, California Water Plan Update 2013, Investing in Innovation & Infrastructure, Highlights, October 2014.*

[62] *DWR, California Water Plan Update 2018, https://water.ca.gov/Programs/California-Water-Plan/Update-2018, accessed December 11, 2020.*

DWR has also been in the process of completing its Climate Action Plan since 2012. Phases I and II of the Climate Action Plan include the guidance of DWR in reducing greenhouse gas emission and the expertise of a climate change technical advisory group formed in 2012, respectively. Phase III of the plan was completed in 2017 with a vulnerability assessment and adaptation plan DWR assets and activities, as related to the projected changes in temperature, wildfire, sea level rise, hydrology, and water supply.[63] As such, climate change and its impacts on water supplies are key factors of new water supply regulations and urban water management plans.

(f) Water Conservation and Recycling

LADWP's 2015 UWMP details the City's efforts to promote the efficient use and management of its water resources and provides the basic policy principles that guide LADWP's decision-making process to secure a sustainable water supply for the City of Los Angeles in the next 25 years. To meet multiple water conservation goals established in ED 5, the Sustainable City pLAn, and the Water Conservation Act of 2009, LADWP's 2015 UWMP aims to reduce per capita potable water use by 22.5 percent by 2025 and by 25 percent by 2035.[64] Following the target reduction of potable water use per capita by 25 percent by 2035, L.A.'s Green New Deal adds an additional target for the City to maintain or reduce 2035 per capita water use through 2050. The City also intends to build upon the success of Save the Drop and develop additional water conservation campaigns; continue benchmarking customer use and recognizing innovative water reduction initiatives; improve data gathering to identify program effectiveness; expand top performing conservation incentive programs for landscape transformation, washing machines, etc.; and expand sub-metering and evaluate smart water meter technologies.[65]

Based on LADWP's 2015 UWMP, recycled water use is projected to reach 59,000 AFY by 2025 and further increase to 75,400 AFY by 2040.[66] Overall, the 2015 LADWP UWMP projects a seven percent lower water demand trend than what was projected in the previous 2010 UWMP.[67] In addition, based on programs and improvements contemplated in the 2015 LADWP UWMP, locally developed water supplies would increase from the current 14 percent to 49 percent in dry years, or to 47 percent in average years by 2040.[68] L.A.'s Green New Deal also has a target to recycle 100 percent

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[63] *DWR, DWR Climate Action Plan, www.water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan, accessed December 11, 2020.*

[64] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[65] *City of Los Angeles, L.A.'s Green New Deal, Sustainable City pLAn, 2019.*

[66] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[67] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[68] *LADWP, 2015 Urban Water Management Plan, June 2016.*

of all wastewater for beneficial reuse by 2035.[69] Beneficial reuse includes, but is not limited to, non-potable reuse, groundwater recharge, and supporting environmental and recreational uses such as those in the L.A. River.[70]

(2) Water Demand

(a) Regional Water Demand

LADWP's 2015 UWMP provides water supply and demand projections in five-year increments to 2040, based on projected population estimates provided by the Southern California Association of Governments (SCAG) in its 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy (2012–2035 RTP/SCS).[71] Table IV.K.1-3 on page IV.K.1-27 shows the projected water demand from the year 2020 through 2040 for the City of Los Angeles.

As shown in Table IV.K.1-3, in 2040 during average year hydrologic conditions, the City's water demand is forecasted to be approximately 675,700 AFY. Use of the current demand per capita within this demand forecast provides a conservative estimate of projected future water demand to ensure that water supplies are available to meet projected demands. LADWP's 2015 UWMP anticipates adequate water supplies would be available to meet the projected demands of the service areas under normal, single-dry, and multi-dry year conditions through 2040.[72]

(b) On-Site Water Demand

As discussed in Section II, Project Description, the Project Site is currently occupied by three existing multi-family residential developments totaling 43,939 square feet, including 112 residential units comprised of 95 studio units, 15 one-bedroom units, and two two-bedroom units. The Project would remove the 43,939 square feet of existing residential use to accommodate the Project. As provided in Table IV.K.1-4 on page IV.K.1-28, the existing residential developments on the Project Site generated a water demand of approximately 16,800 gallons per day or approximately 18.82 acre-feet per year.

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[69] *Baseline from LASAN: In Fiscal Year 2017–2018, 27 percent of wastewater was recycled.*

[70] *LADWP, Water Supply Assessment—8th, Grand and Hope Project, November 19, 2019.*

[71] *Since preparation of the 2015 Urban Water Management Plan, new growth forecasts have become available in SCAG's 2016–2040 and 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). However, the 2016–2040 and 2020–2045 RTP/SCS forecasts are only marginally higher than the 2012 forecasts, in terms of current estimates and future projections and would, therefore, not significantly affect water demand projections.*

[72] *LADWP, 2015 Urban Water Management Plan, June 2016, Exhibits 11E–11K.*

Table IV.K.1-3
City of Los Angeles Water Demand Projections Based on Hydrologic Conditions
(thousand AFY)

Hydrologic Conditions	Year				
	2020	2025	2030	2035	2040
Average Year	611.8	644.7	652.9	661.8	675.7
Single Dry Year	642.4	676.9	685.5	694.9	709.5
Multi-Dry Year	642.4	676.9	685.5	694.9	709.5

AFY = acre-feet per year

Demands include existing passive conservation.

Source: LADWP, 2015 Urban Water Management Plan, Exhibits 11F, 11G, and 11H.

(3) Water Infrastructure

Water infrastructure in the vicinity of the Project Site is maintained and operated by LADWP. LADWP ensures the reliability and quality of its water supply through an extensive distribution system that includes 117 storage tanks and reservoirs, 84 pump stations, 7,326 miles of distribution mains and trunk lines within the City, and a total storage capacity of 311,000 acre-feet.[73] Much of the water flows north to south, entering Los Angeles at the Los Angeles Aqueduct Filtration Plant in Sylmar, which is owned and operated by LADWP. Water entering the Los Angeles Aqueduct Filtration Plant undergoes treatment and disinfection before being distributed throughout the LADWP's water service area.[74]

Domestic water service is available to the Project Site via LADWP water lines within the adjacent streets. According to the Utility Report, there is a 4-inch water line that splits the northerly and southerly portions of the Project Site in the existing Bellwood Avenue alignment, connecting to a 6-inch main line on Olympic Boulevard. Additionally, another existing 12-inch main line runs along the southbound side of Olympic Boulevard.

In addition to providing domestic water service, LADWP also provides water for fire protection services in accordance with the City's Fire Code (LAMC Chapter V, Article 7). According to the Utility Report, there are currently two existing fire hydrants located within 300 feet of the Project Site boundary along the north side of Olympic Boulevard fronting the neighboring properties.

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[73] *LADWP, Briefing Book 2018–2019.*

[74] *LADWP, 2015 Urban Water Management Plan, June 2016.*

Table IV.K.1-4
Estimated Project Water Demand

Land Use	No. of Units/ Floor Area	Water Demand Rate (gpd/unit)[a]	Demand (gpd)
Existing Uses to Be Removed			
Residential	112 units	150	16,800
Total Existing to Be Removed			*16,800*
Proposed			
Senior Independent Units	71 units	110	7,810
Assisted Living Guest Rooms	75 units	110	8,250
Memory Care Guest Rooms	46 units	110	5,060
Indoor Common Areas	50,463 sf	0.05	2,523
Outdoor Common Areas	14,630 sf	0.05	732
Indoor Swimming Pool	1 units	16,458	16,458
Indoor Spa	1 units	1,908	1,908
Total Proposed Water Demand			**42,741**
Total Existing Water Demand			***16,800***
Project Net Water Demand (Proposed – Existing)			**25,941**

gpd = gallons per day

sf = square feet

Note: Some numbers do not add up perfectly due to rounding.

[a] *Based on 2012 LASAN Sewer Generation Rates.*

[b] *Based on correspondence from BOS to Department of City Planning regarding the projected wastewater discharges for the proposed Project dated July 11, 2019.*

Source: Fuscoe Engineering, Inc, Senior Residential Community at The Bellwood Water, Sewer, and Energy Infrastructure Assessment Report; Eyestone Environmental, 2021.

3. Project Impacts

a. Thresholds of Significance

In accordance with the State CEQA Guidelines Appendix G, the Project would have a significant impact related to water supply and infrastructure if it would:

Threshold (a): Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Threshold (b): (Not) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

For this analysis, the Appendix G Thresholds listed above are relied upon. The analysis utilizes factors and considerations identified in the City's 2006 L.A. CEQA Thresholds Guide, as appropriate, to assist in answering the Appendix G Threshold questions. Refer to Section IV.K.2, Utilities and Service Systems—Wastewater, of this Draft EIR for a discussion of wastewater impacts; Section IV.C, Energy Conservation and Infrastructure of this Draft EIR for a discussion of electric power and natural gas infrastructure; and Section VI, Other CEQA Considerations for a discussion of stormwater and telecommunications facility infrastructure.

The *L.A. CEQA Thresholds Guide* identifies the following criteria to evaluate water supply and infrastructure impacts:

- The total estimated water demand for the project;
- Whether sufficient capacity exists in the water infrastructure that would serve the project, taking into account the anticipated conditions at project buildout;
- The amount by which the project would cause the projected growth in population, housing or employment for the Community Plan area to be exceeded in the year of project completion; and,
- The degree to which scheduled water infrastructure or project design features would reduce or offset service impacts.

b. Methodology

The analysis of the Project's impact relative to water supply is based on a calculation of the Project's anticipated net water demand. Consistent with LADWP's methodology, the estimated net water demand for the Project is calculated by applying the City of Los Angeles Bureau of Sanitation's (LASAN) sewer generation factors to the Project's proposed uses. The water demand of the existing uses to be removed was then subtracted from the Project's total water demand to determine the Project's net water demand. The resulting net demand for water associated with the Project is then analyzed relative to LADWP's existing and future water supplies to determine if LADWP would be able to accommodate the Project's water demands during average, single-dry, and multiple-dry years hydrologic conditions.

The analysis with regard to water infrastructure is based on the Utility Report prepared for the Project by Fuscoe Engineering, Inc., which is included in Appendix J of

this Draft EIR. The Utility Report includes a comparison of the estimated net water demand for the Project to the available capacity of the existing water infrastructure.

c. Project Design Features

No specific project design features are proposed with regard to water supply.

d. Analysis of Project Impacts

Threshold (a): Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?[75]

(1) Impact Analysis

(a) Construction

During construction, water will be required intermittently for dust control, equipment cleaning, soil grading and preparation during the early phases of the Project. The latter phases of construction require less water usage. As discussed in the Utility Report, the Project would require the relocation of the existing water lines that serve the Project Site as well as construction of new on-site water distribution lines to serve the new buildings and uses due to the proposed realignment of Bellwood Avenue, which currently bisects the north and south portions of the Project Site. Specifically, construction of the Project would require the existing 4-inch line to be decommissioned, removed, and replaced with two new distinct water main extensions, including approximately 250 feet of new 8-inch line to be installed in the easterly half of Bellwood Avenue and approximately 213 feet of new 8-inch line to be installed in the westerly drive aisle of Bellwood Avenue. These two new 8-inch main lines would tie into the existing 12-inch main in Olympic Boulevard.

Construction impacts associated with the installation of water distribution lines would primarily involve trenching to place the lines below surface. Installation of new water infrastructure would be limited to on-site water distribution and off-site work associated with installation of the new 8-inch water lines and connections to the public main. Prior to ground disturbance, Project contractors would coordinate with LADWP to identify the

[75] *Refer to Section IV.K.2, Utilities and Service Systems – Wastewater of this Draft EIR for a discussion of wastewater impacts; Section IV.K.3, Utilities and Service Systems—Energy Infrastructure of this Draft EIR for a discussion of electric power and natural gas infrastructure; and Section VI, Other CEQA Considerations for a discussion of stormwater and telecommunications facility infrastructure.*

locations and depths of all lines and to avoid existing water lines and disruption of water service. LADWP would review and approve all appropriate connection requirements, pipe depths, and connection location(s). The limited off-site connection activities could also temporarily affect access in adjacent rights-of-way. Therefore, as discussed in Section IV.I, Transportation, of this Draft EIR, a Construction Traffic Management Plan would be implemented during Project construction pursuant to Project Design Feature TR-PDF-1 to reduce any temporary pedestrian and traffic impacts. The Construction Traffic Management Plan would ensure safe pedestrian access and vehicle travel in general, and emergency vehicle access, in particular, throughout the construction period. **Overall, construction activities associated with the Project would not require or result in the relocation or construction of new water facilities or expansion of existing facilities that could have a significant impact on the environment. As such, construction-related impacts to water infrastructure would be less than significant.**

(b) Operation

Water service to the Project Site would continue to be supplied by LADWP for domestic and fire protection uses. As discussed in the Utility Report, while domestic water demand is typically the main contributor to operational water consumption, fire flow demands have a much greater instantaneous impact on infrastructure, and therefore, are the primary means for analyzing infrastructure capacity.

Fire flow to the Project would be required to meet City fire flow requirements. Specifically, the Project would comply with LAMC Section 57.507.3.1, which establishes fire flow standards by development type. As previously described, LAFD has determined the Project's required fire flow is 6,000 gpm to 9,000 gpm from four to six hydrants flowing simultaneously with a residual pressure of 20 psi. This translates to a required flow of 1,500 gpm for each hydrant. As previously discussed, there are two existing fire hydrants within 300 feet of the Project Site. As part of the Utility Report, an Information of Fire Flow Availability Request (IFFAR) was submitted to LADWP to determine available fire hydrant flow from the two existing fire hydrants as well as the two proposed fire hydrants. Based on the completed IFFAR (see Attachment A of the Utility Report), the two existing fire hydrants as well as the two proposed fire hydrants flowing simultaneously are able to deliver combined flows of 6,000 gpm, which would meet the minimum fire flow requirement of 6,000 gpm. Therefore, based on the IFFAR, there is adequate fire flow available for the Project to comply with the fire flow requirements identified in accordance with LAMC Section 57.507.3.1.

In addition, a Service Advisory Report (SAR) was submitted to LADWP to determine if the existing domestic water infrastructure would meet the Project's demands for fire and domestic water use. Based on the results of the SAR (see Attachment A of the Utility Report), LADWP has indicated that the existing infrastructure would need to be upgraded

in order to adequately serve the proposed development. Specifically, as discussed above, the existing 4-inch line in Bellwood Avenue would be abandoned and replaced with an 8-inch line approximately 250 feet in length within the easterly drive aisle of Bellwood Avenue and approximately 213 feet of a new 8-inch line in the westerly drive aisle of Bellwood Avenue. The two new 8-inch lines would tie into the existing 12-inch main in Olympic Boulevard. These upgrades, identified by LADWP as a part of the SAR, would ensure adequate water capacity is provided for the Project. In addition, LADWP provided a will-serve letter confirming that water service would be available for the Project (see Attachment C of the Utility Report).

Based on the above, operation of the Project would not result in significant environmental effects associated with the construction of expanded water facilities. Therefore, the Project's operational impacts to water infrastructure would be less than significant.

(2) Mitigation Measures

Project-level impacts related to water infrastructure would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to water infrastructure were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (b): Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

(1) Impact Analysis

(a) Construction

Construction activities for the Project would result in a temporary demand for water associated with dust control, equipment and site cleanup, excavation and export, soil compaction and earthwork, mixing and placement of concrete, irrigation for plant and landscaping establishment, testing of water connections and flushing, and other short-term related activities. These activities would occur incrementally throughout construction of the Project (from the start of construction to Project buildout). The amount of water used during construction would vary depending on soil conditions, weather, and the specific activities being performed. However, given the temporary nature of construction activities and the short-term and intermittent water use during construction of the Project, the

anticipated water demand during construction would be less than the 25,941 gpd of the Project's net new water consumption at buildout provided in Table IV.K.1-4 on page IV.K.1-28.[76] Furthermore, as concluded in LADWP's 2015 UWMP, projected water demand for the City would be met by the available supplies during an average year, single-dry year, and multiple-dry year in each year from 2020 through 2040. Project construction is anticipated to begin in 2021 and to be completed in 2023. Therefore, the Project's temporary and intermittent demand for water during construction could be met by the City's available supplies during each year of Project construction.

Based on the above, LADWP would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, the Project's construction-related impacts on water supply would be less than significant.

(b) Operation

As described in Section II, Project Description, of this Draft EIR, the Project would remove the existing uses on the Project Site to develop 192 senior housing residential units, including 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms. Based on the size of the land uses and the Project's resulting estimated water demand, the Project is not subject to the requirements of SB 610 regarding preparation of a WSA.

Development of the Project would result in an increase in long-term water demand for consumption, operational uses, maintenance, and other activities on the Project Site. Consistent with LADWP's methodology, the analysis of the Project's impacts relative to water supply is based on a calculation of the Project's water demand by applying the sewage generation factors established by LASAN, which also serve to estimate water demand to the proposed uses.

As shown in Table IV.K.1-4, when accounting for the removal of existing uses, the Project would result in a net average daily water demand of approximately 25,941 gpd, or approximately 29.1 AFY. This is a conservative calculation as it does not account for water conservation measures such as the mandatory indoor water reduction rates required by the City of Los Angeles Green Building Code.

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[76] *Based on the site disturbance area and size of the Project Site, construction activities are estimated to generate a peak water demand value of 1,000 GPD associated with earthwork activities, dust control, and concrete placement. Refer to the Utility Report provided in Appendix J, of this Draft EIR.*

LADWP's 2015 UWMP forecasts adequate water supplies to meet all projected water demands in the City for normal, single-dry, and multiple-dry years through the year 2040. Furthermore, as outlined in their 2015 UWMP, LADWP is committed to providing a reliable water supply for the City. LADWP's 2015 UWMP takes into account climate change and the concerns of drought and dry weather and notes that the City of Los Angeles will meet all new demand for water due to projected population growth through a combination of water conservation and water recycling.[77] LADWP's 2015 UWMP also furthers the goals of the City's Executive Directive and L.A.'s Green New Deal. LADWP's 2015 UWMP also addresses the current and future SWP supply shortages and concludes that MWD's actions in response to the threats to the SWP would ensure continued reliability of its water deliveries. By focusing on demand reduction and alternative sources of water supplies, LADWP would further ensure that long-term dependence on MWD supplies will not be exacerbated by potential future shortages.[78] Additionally, as described above, water conservation and recycling will play an increasing role in meeting future water demands in the City.

LADWP's 2015 UWMP utilized SCAG's RTP data that provide for comprehensive water demand forecasts, taking into account changes in population, housing units and employment.[79] As discussed in Section VI, Other CEQA Considerations, of this Draft EIR, based on the generation rates used in the City of Los Angeles VMT Calculator , the Project would generate approximately 231 new residents[80], 192 new households, and approximately 88 employees[81] at Project buildout in 2023, and would be consistent with SCAG's 2016-2040 RTP/SCS growth projections for the City of Los Angeles Subregion. Per the 2016–2040 RTP/SCS, the estimated 231 new residents generated by the Project would represent approximately 0.21 percent of the population growth forecasted by SCAG

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[77] *LADWP, 2015 Urban Water Management Plan, June 2016, p. ES-1 through ES-30.*

[78] *Ibid.*

[79] *The demand projections in LADWP's 2015 Urban Water Management Plan are based on demographic growth projections in SCAG's 2012–2035 RTP/SCS, the 2000 U.S. Census data and the 2010 U.S. Census data. Since preparation of LADWP's 2015 Urban Water Management Plan, new growth forecasts have become available in SCAG's 2016–2040 RTP/SCS and SCAG's 2020–2045 RTP/SCS. However, the growth forecasts in SCAG's 2016–2040 RTP/SCS and 2020–2045 RTP/SCS only marginally higher than the 2012–2035 RTP/SCS. Therefore, the growth forecasts of the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS would not significantly affect water demand projections.*

[80] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H. The VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would represent approximately 0.22 percent of SCAG's projected population growth for the City of Los Angeles Subregion between 2019 and 2023 as compared to approximately 0.21 percent. As such, it would be well within SCAG's projections for the City of Los Angeles Subregion, and the conclusions of the analysis would remain the same.*

[81] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H.*

in the City of Los Angeles Subregion between 2019 and 2023, the Project's estimated 192 new households would constitute approximately 0.37 percent of the household growth forecasted between 2019 and 2023, and the Project's estimated 88 employees would constitute approximately 0.13 percent of the employment growth forecasted between 2019 and 2023.[82]

Per the 2020–2045 RTP/SCS, the estimated 231 new residents generated by the Project would represent approximately 0.20 percent of the population growth forecasted by SCAG in the City of Los Angeles Subregion between 2019 and 2023, the estimated 192 new households would constitute approximately 0.33 percent of the household growth forecasted between 2019 and 2023, and the estimated 88 employees would constitute approximately 0.22 percent of the employment growth forecasted between 2019 and 2023.[83] As such, the Project would be well within SCAG's projections for the City of Los Angeles Subregion.

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[82] *Based on a linear interpolation of SCAG's 2012–2040 data. The 2019 values for population, housing, and employment are calculated using SCAG's 2012 and 2040 values to find the average increase between years and then applying that annual increase to each year until 2019.*

Population growth between 2019 (4,036,475 persons) and 2023 (4,145,604 persons) is approximately 109,129 persons. The Project's 231 new residents would represent approximately 0.21 percent of this growth [(231 ÷ 109,129) × 100 = 0.211].

Household growth between 2019 (1,416,700 households) and 2023 (1,468,814 households) is approximately 52,114 households. The Project's 192 new households would represent approximately 0.37 percent of this growth [(192 ÷ 52,114) × 100 = 0.368].

Employment growth between 2019 (1,814,575 jobs) and 2023 (1,882,104 jobs) is approximately 67,529 jobs. The Project's 88 new employees would represent approximately 0.13 percent of this growth [(88 ÷ 67,529) × 100 = 0.130].

[83] *Based on a linear interpolation of SCAG's 2016–2045 data. The 2019 values for population and housing are calculated using SCAG's 2016 and 2045 values to find the average increase between years and then applying that annual increase to each year until 2019.*

Population growth between 2019 (4,020,438 persons) and 2023 (4,135,955 persons) is approximately 115,517 persons. The Project's 231 new residents would represent approximately 0.20 percent of this growth [(231 ÷ 115,517) × 100 = 0.199]. As noted above the VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would represent approximately 0.21 percent of SCAG's projected population growth for the City of Los Angeles Subregion between 2019 and 2023 as compared to approximately 0.20 percent. As such, it would be well within SCAG's projections for the City of Los Angeles Subregion, and the conclusions of the analysis would remain the same.

Household growth between 2019 (1,411,069 households) and 2023 (1,469,828 households) is approximately 58,759 households. The Project's 192 new households would represent approximately 0.33 percent of this growth [(192 ÷ 58,759) × 100 = 0.326].

(Footnote continued on next page)

Based on the above, the Project's net water demand of 25,941 gpd (approximately 29.1 AFY) has been accounted for in the City's overall total demand projections set forth in its 2015 UWMP. Specifically, the 2015 LADWP UWMP forecasts adequate water supplies to meet all projected water demands in the City through the year 2040 during average years, single-dry years, and multiple-dry years. Therefore, the increase in water demand for the Project falls within the available and projected water supplies during an average year, single-dry year, and multiple-dry year through the year 2040, as well as the intervening years (i.e., 2023), as described in the 2015 LADWP UWMP.

Based on the above, LADWP would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, the Project's operation-related impacts on water supply would be less than significant.

(2) Mitigation Measures

Project-level impacts related to water supply would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to water supply were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

e. Cumulative Impacts

(1) Impact Analysis

The Project, in conjunction with growth forecasted in the City through 2023 (i.e., the Project's buildout year), would cumulatively increase the demand for water, thus potentially resulting in cumulative impacts on water supplies and water infrastructure. Cumulative growth in the Project Site vicinity through 2023 includes specific known development projects as well as general ambient growth projected to occur. As discussed in Section III, Environmental Setting, of this Draft EIR, the projected growth reflected by Related Project Nos. 1 through 6 is a conservative assumption, as some of the related projects may not be built out by 2023, may never be built, or may be approved and built at reduced densities.

Employment growth between 2019 (1,878,052 jobs) and 2023 (1,917,721 jobs) is approximately 39,669 jobs. The Project's 88 new employees would represent approximately 0.22 percent of this growth [(88 ÷ 39,669) × 100 = 0.221].

To provide a conservative forecast, the future baseline forecast assumes that Related Project Nos. 1 through 6 are fully built out by 2023, unless otherwise noted.

(a) Water Infrastructure

The geographic context for the cumulative impact analysis on water infrastructure is the vicinity of the Project Site (i.e., the water infrastructure that would serve the Project and related projects). Development of the Project and future new development in the vicinity of the Project Site would cumulatively increase demands on the existing water infrastructure system. However, as with the Project, other new development projects would be subject to LADWP review to ensure that the existing public infrastructure would be adequate to meet the domestic and fire water demands of each project, and individual projects would be subject to LADWP and other City requirements regarding infrastructure improvements needed to meet respective water demands, flow and pressure requirements, etc. Furthermore, to ensure its infrastructure is sufficient to meet ongoing demand, LADWP will continue to implement its $6.3 billion five-year Water System capital improvement plan, which includes replacement of distribution mainlines, trunk lines, large valves, and water meters, as well as ongoing maintenance and rehabilitation of facilities such as pump stations, pressure regulators, and in-city reservoirs and tanks.[84] In addition, in accordance with City requirements, prior to ground disturbance, related projects would also coordinate with LADWP to identify the locations and depths of all lines. Furthermore, LADWP would be notified in advance of proposed ground disturbance activities to avoid disruption of water service associated with the related projects. LADWP would also review and approve all appropriate connection requirements, pipe depths, and connection location(s) associated with the related projects. **Therefore, the Project and related projects would not result in significant cumulative impacts related to the construction or expansion of water infrastructure. As such, the Project's contribution would not be cumulatively considerable, and cumulative impacts would be less than significant.**

(b) Water Supply

The geographic context for the cumulative impact analysis on water supply is the LADWP service area (i.e., the City and portions of the cities of West Hollywood, Culver City, South Pasadena, and the Owens Valley). As discussed above, LADWP, as a public water service provider, is required to prepare and periodically update its urban water management plan to plan and provide for water supplies to serve existing and projected demands. LADWP's 2015 UWMP accounts for existing development within the City, as well as projected growth through the year 2040. Additionally, under the provisions of Senate Bill 610, LADWP is required to prepare a comprehensive WSA for every new development "project" (as defined by Section 10912 of the Water Code) within its service

[84] *LADWP, 2018–19 Water Infrastructure Plan, revised November 2019.*

area that reaches certain thresholds. The WSA for such projects would evaluate the quality and reliability of existing and projected water supplies, as well as alternative sources of water supply and measures to secure alternative sources if needed.

The estimated water demand of the related projects is shown in Table IV.K.1-5 on page IV.K.1-39. As shown therein, the related projects would generate a total average water demand of approximately 358,540 gpd (401.6 AFY). The estimate of the related projects' water demand is conservative as it does not account for water conservation measures such as the mandatory indoor water reduction rates required by the City of Los Angeles Green Building Code or the water demand of the existing uses on related project sites that the related projects may remove. The related projects' demand combined with the Project's net increase in water demand of 25,941 gpd (approximately 29.1 AFY) would result in a cumulative increase in average daily water use of approximately 384,481 gpd (430.7 AFY).

As previously stated, based on water demand projections through 2040 in LADWP's 2015 UWMP, LADWP determined that it will be able to reliably provide water to its customers through the year 2040, as well as the intervening years (i.e., 2023, the Project's buildout year) based on demographic growth projections in SCAG's 2012–2035 RTP/SCS[85], which includes the Project and related projects. Based on the 2015 LADWP UWMP water demand forecasts, it is anticipated that the LADWP's water demand in 2023 would be approximately 631,550 gpd (approximately 707.4 AFY).[86] The related projects' demand combined with the Project's net increase in water demand of 25,941 gpd (approximately 29.1 AFY) would result in a cumulative increase in average daily water use of approximately 384,481 gpd (430.7 AFY), or 0.07 percent of LADWP's projected demand of 631,550 AFY in 2023.

In addition, compliance of the Project and other future development projects with the numerous regulatory requirements that promote water conservation described above would also reduce water demand on a cumulative basis. For example, certain related projects would be subject to the City's Green Building Code requirement to reduce indoor water use

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[85] *Since preparation of the 2015 Urban Water Management Plan, new growth forecasts have become available in SCAG's 2016–2040 and 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). However, the 2016–2040 and 2020–2045 RTP/SCS forecasts are only marginally higher than the 2012 forecasts, in terms of current estimates and future projections and would, therefore, not significantly affect water demand projections.*

[86] *LADWP, 2015 Urban Water Management Plan, Exhibit 2L, Water Demand Forecast with Passive Conservation Savings from Codes, Ordinances, and Conservation Phases for LADWP Service Area. Based on a straight-line interpolation of the projected demand for 2020 (approximately 611,815 AFY) and 2025 (approximately 644,706 AFY). The 2023 value is extrapolated from 2020 and 2025 values: [(644,706 AFY – 611,815 AFY) ÷ 5) * 3] + 611,815 = ~ 631,550 AFY.*

Table IV.K.1-5
Cumulative Water Demand

No.	Project	Land Use	Size	Generation Rate[a,b]	Water Demand (gpd)
1	Westfield Century City New Century Plan Project 10250 Santa Monica Boulevard, 1801 Avenue of the Stars, and 1930 Century Park West Street	Condominiums	262 du	190 gpd/du	49,780
		Shopping Center	358,881 sf	0.05 gpd/sf	17,944
2	Century City Center[c] 1950 S. Avenue of the Stars	Office	725,830 sf	0.12 gpd/sf	87,100
		Retail	4,120 sf	0.025 gpd/sf	103
		Mobility Hub	1,300 sf	—	—
3	Apartments 10306 W. Santa Monica Boulevard	Apartments	116 du	190 gpd/du	22,040
4	Century Plaza (Hyatt Regency Hotel) 2025 S. Avenue of the Stars	Condominiums	193 du	190 gpd/du	36,670
		Hotel	240 rm	120 gpd/rm	28,800
		Office	117,647 sf	0.12 gpd/sf	14,118
		Retail	93,814 sf	0.025 gpd/sf	2,345
		Spa/Fitness[d]	16,800 sf	0.65 gpdsf	10,920
		Restaurant (15,463 sf)[e]	516 seat	30 gpdseat	15,480
5	Apartments 10400 W. Santa Monica Boulevard	Apartments	96 du	190 gpd/du	18,240
6	Fox Studios Master Plan 2016 10201 W. Pico Boulevard	Commercial (may include creative office, specialty space, stage space, and facility and utility support)	1,100,000 sf	0.05 gpd/sf	55,000
Related Projects Water Demand					**358,540**
Project Net Water Demand					**25,941**
Total Water Demand for Related Projects and Project					**384,481**

Table IV.K.1-5 (Continued)
Cumulative Water Demand

No.	Project	Land Use	Size	Generation Rate[a,b]	Water Demand (gpd)

du = dwelling units

gpd = gallons per day

rm = rooms

sf = square feet

[a] *This analysis is based on sewage generation rates provided by LASAN's Sewerage Facilities Charge, Sewage Generation Factor for Residential and Commercial Categories, effective April 6, 2012.*

[b] *This analysis conservatively assumes that all dwelling units are 3-bedroom units.*

[c] *The related project information reflects the modified Century City Center project that was entitled in January 2015 as part of the Final Subsequent Environmental Impact Report. An alternative residential project, which proposes the development of 483 dwelling units, was also entitled for this site. Based on 2012 LASAN Sewer Generation Rates, the proposed alternative would generate a water demand of approximately 91,770 gpd, as compared to the 87,203 gpd shown above. Based on water demand projections through 2040 in LADWP's 2015 UWMP, LADWP determined that it will be able to reliably provide water to its customers through the year 2040, as well as the intervening years based on the growth projections in SCAG's RTP/SCS. Therefore, it is anticipated LADWP would be able to supply the additional demands of the alternative residential project.*

[d] *The rate of 650 gallons per 1,000 square feet for "Health Club/Spa" is applied.*

[e] *Restaurant space is assumed to be all full-service restaurant and assumed to be equivalent to 30 sf per seat for a conservative estimate.*

Source: Gibson Transportation Consulting, Inc., 2020; Eyestone Environmental, 2021.

by at least 20 percent and all projects would be required to use fixtures that conserve water. In addition, certain large, related projects meeting the thresholds under SB 610 would be required to prepare and receive LADWP approval of a WSA that demonstrates how the project's water demand will be met.

Overall, as discussed above, the 2015 LADWP UWMP demonstrates that the City will meet all new water demands from projected population growth, through a combination of water conservation and water recycling. LADWP's 2015 UWMP specifically outlined the creation of sustainable sources of water for the City to reduce dependence on imported supplies. LADWP's 2015 UWMP also incorporates the goals of ED 5 and the City's Sustainability pLAn. LADWP is planning to achieve these goals by expanding its water conservation efforts through public education, installing high-efficiency water fixtures, providing incentives, and expanding the City's outdoor water conservation program.[87] To increase recycled water use, LADWP is expanding the recycled water distribution system to provide water for irrigation, industrial use, and groundwater recharge.[88] Furthermore, LADWP will continue to update its UWMP every five years to ensure that water supply continues to be available.

Based on the above analysis, it is anticipated that LADWP would be able to meet the water demands of the Project and future growth through 2023 and beyond. Therefore, the Project and related projects would not result in significant cumulative impacts related to water demand. As such, the Project's contribution would not be cumulatively considerable, and cumulative impacts would be less than significant.

(2) Mitigation Measures

Cumulative impacts related to water supply and infrastructure would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts related to water supply and infrastructure were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

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[87] *LADWP, 2015 Urban Water Management Plan, June 2016.*

[88] *LADWP, 2015 Urban Water Management Plan, June 2016.*

IV. Environmental Impact Analysis

K.2 Utilities and Service Systems—Wastewater

1. Introduction

This section of the Draft EIR analyzes the potential impacts of the Project with regard to the existing wastewater infrastructure and treatment facilities that serve the Project Site. The analysis describes the existing wastewater system (including local and regional conveyance and treatment facilities), calculates the wastewater to be generated by the Project, and evaluates whether sufficient capacity is available and would be available to meet the Project's estimated wastewater generation. The analysis is based, in part, on the *Water, Sewer, and Energy Infrastructure Assessment Report—Senior Residential Community at the Bellwood* (Utility Report), dated February 2020, which was prepared for the Project by Fuscoe Engineering, Inc. and is included as Appendix J of this Draft EIR.

2. Environmental Setting

a. Regulatory Framework

(1) State

The California Green Building Standards Code, commonly referred to as the CALGreen Code, is set forth in California Code of Regulations Title 24, Part 11, and establishes voluntary and mandatory standards pertaining to the planning and design of sustainable site development and water conservation, among other issues. Under the CALGreen Code, all water closets (i.e., flush toilets) are limited to 1.28 gallons per flush, and urinals are limited to 0.5 gallon per flush (or 0.125 gallon per flush for wall-mounted urinals). In addition, maximum flow rates for faucets are established at: 2.0 gallons per minute (gpm) at 80 pounds per square inch (psi) for showerheads; 1.2 gpm at 60 psi for residential lavatory faucets and 0.5 gpm at 60 psi for nonresidential lavatory faucets; and 1.8 gpm at 60 psi for kitchen faucets.

(2) Local

(a) City of Los Angeles General Plan Framework

The City of Los Angeles General Plan Framework guides the update of the community plans and Citywide elements, thereby providing a Citywide strategy for long-term growth. As such, it addresses state and federal mandates to plan for the future. Chapter 9, Infrastructure and Public Services, of the City's General Plan Framework identifies goals, objectives, and policies for utilities in the City. Goal 9A of Chapter 9 is to provide for adequate wastewater collection and treatment capacity for the City and in basins tributary to City-owned wastewater treatment facilities.

(b) City of Los Angeles Integrated Resources Plan and One Water LA 2040 Plan

The City of Los Angeles Integrated Resources Plan (City's IRP) addresses the facility needs of the City's wastewater program, recycled water, and urban runoff/ stormwater management through the year 2020.[1] The City's IRP preparation process began in 1999 in two phases. Phase I of the City's IRP addressed the anticipated water, wastewater, and stormwater needs of the City through the year 2020 using comprehensive, basin-wide water resources planning. During this initial phase, which took place from 1999 to 2001, gaps in the existing water system's capability to serve future populations, as projected by the Southern California Association of Governments (SCAG), were examined and different Preliminary Alternatives to address these gaps were created. Phase II of the City's IRP, which took place from 2002 to 2006, involved the selection and comparison of four Preliminary Alternatives all aimed at ensuring implementation of the appropriate infrastructure, policies, and programs to reliably serve Los Angeles to 2020 and beyond. Within Phase II of the City's IRP, a Financial Plan, a Public Outreach Program, and a five-volume Facilities Plan were also developed. The Facilities Plan contains alternative development options and a Capital Improvement Program, as well as wastewater, water, and runoff management strategies. The Capital Improvement Program provides anticipated capital, operation, maintenance, project timing, and implementation strategies for tracking and monitoring triggers.[2]

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[1] *The IRP replaced the City's 1991 Wastewater Facilities Plan.*

[2] *City of Los Angeles Department of Public Works Bureau of Sanitation and Department of Water and Power, Water Integrated Resources Plan 5-Year Review FINAL Documents, June 2012; City of Los Angeles Department of Public Works Bureau of Sanitation and Department of Water and Power, City of Los Angeles Integrated Resources Plan Summary Report, December 2006; City of Los Angeles Department of Public Works Bureau of Sanitation and Department of Water and Power, City of Los Angeles Integrated Resources Plan: Planning for Wastewater, Recycled Water and Storm Water*

(Footnote continued on next page)

The Los Angeles City Council certified the IRP Final Environmental Impact Report (EIR) prepared within Phase II on November 14, 2006, and adopted a final alternative, the Approved Alternative (Alternative 4), from the four Preliminary Alternatives. The City's Final IRP 5-Year Review was released in June 2012. According to the City's Final IRP 5-Year Review, Alternative 4 included 12 projects that were separated into two categories: (1) "Go Projects" for immediate implementation; and (2) "Go-If Triggered Projects" for implementation in the future once a trigger is reached.[3] Triggers for these projects include wastewater flow, population, regulations, or operational efficiency. Based on the City's Final IRP 5-Year Review, the Go Projects consisted of six capital improvement projects for which triggers were considered to have been met at the time the City's IRP EIR was certified. The Go-If Triggered Projects consisted of six capital improvement projects for which triggers were not considered to have been met at the time the City's IRP EIR was certified.

Since the implementation of the City's IRP, new programs and projects, which have resulted in a substantial decrease in wastewater flows, have affected the Go Projects and Go-If Triggered Projects. Based on the City's Final IRP 5-Year Review, two of the Go Projects have been moved to the Go-If Triggered category (Go Project 2 and Go Project 3), and two have been deferred beyond the 2020 planning window of the IRP (Go Project 4 and Go Project 5). Construction of wastewater storage facilities at the Donald C. Tillman Water Reclamation Plant (Go Project 1) has been completed. In addition, Go Project 6, involving the design of the North East Interceptor Sewer Phase II, is no longer being pursued.

As discussed above, the City's IRP addressed the anticipated water, wastewater, and stormwater needs of the City through the year 2020. In April 2018, the City prepared the One Water LA 2040 Plan (One Water LA Plan), an integrated approach to Citywide recycled water supply, wastewater treatment, and stormwater management.[4] The new plan builds upon the City's Water IRP, which projected needs and set forth improvements and upgrades to wastewater conveyance systems, recycled water systems, and runoff management programs through the year 2020, and extends its planning horizon to 2040. The One Water LA Plan proposes a collaborative approach to managing the City's future water, wastewater treatment, and stormwater needs with the goal of yielding sustainable, long-term water supplies for Los Angeles to ensure greater resilience to drought conditions and climate change. The One Water LA Plan is also intended as a step toward meeting

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Management: A Visionary Strategy for the Right Facilities, in the Right Place, at the Right Time, Executive Summary, December 2006.

[3] *City of Los Angeles Department of Public Works Bureau of Sanitation and Department of Water and Power, Water Integrated Resources Plan 5-Year Review FINAL Documents.*

[4] *City of Los Angeles, One Water LA 2040 Plan, Volume 1—Summary Report, Final Draft, April 2018.*

the Mayor's Executive Directive to reduce the City's purchase of imported water by 50 percent by 2024.[5] Major challenges addressed in the One Water LA Plan include recurring drought, climate change, and the availability of recycled water in the future in light of declining wastewater volumes.

(c) Sewer System Management Plan

On May 2, 2006, the State Water Resources Control Board adopted the Statewide General Waste Discharge Requirements for publicly owned sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in California. Under the Statewide General Waste Discharge Requirements, the owners of such systems must comply with the following requirements: (1) acquire an online account from the State Water Board and report all sanitary sewer overflows online; and (2) develop and implement a written plan referred to as a Sewer System Management Plan to control and mitigate sanitary sewer overflows and make it available to any member of the public upon request in writing.

In accordance with the Statewide General Waste Discharge Requirements, the City of Los Angeles acquired online accounts from the State Water Board and began reporting sanitary sewer overflows by the due date of January 2, 2007. The City's original Sewer System Management Plan was adopted by the City's Board of Public Works and certified with the State Water Resources Control Board on February 18, 2009.[6] The City's Sewer System Management Plans were last updated in January 2019 upon completion of a biennial audit, which confirmed the City's Sewer System Management Plans are in full compliance with the Statewide General Waste Discharge Requirements and are effective.[7]

The goal of the Sewer System Management Plan for the Hyperion Sanitary Sewer System, in which the Project Site is located (as discussed below), is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system.[8] In addition, the Sewer System Management Plan will help to reduce and prevent sanitary sewer overflows as well as mitigate any sanitary sewer overflows that do occur.

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[5] *City of Los Angeles, Office of the Mayor, Executive Directive No. 5, Emergency Drought Response—Creating a Water Wise City, October 14, 2014.*

[6] *LASAN, Sewer System Management Plan: Hyperion Sanitary Sewer System, January 2019.*

[7] *LASAN, Sewer System Management Plan: Hyperion Sanitary Sewer System, January 2019.*

[8] *LASAN, Sewer System Management Plan: Hyperion Sanitary Sewer System, January 2019.*

(d) City of Los Angeles Municipal Code

Los Angeles Municipal Code (LAMC) Sections 64.11 and 64.12 require approval of a sewer permit prior to connection to the sewer system. New connections to the sewer system are assessed a Sewerage Facilities Charge. The rate structure for the Sewerage Facilities Charge is based upon wastewater flow strength as well as volume. The determination of wastewater strength for each applicable project is based on City guidelines for the average wastewater concentrations of biological oxygen demand and suspended solids, for each type of land use. Fees paid to the Sewerage Facilities Charge are deposited in the City's Sewer Construction and Maintenance Fund for sewer and sewage-related purposes, including, but not limited to, industrial waste control and water reclamation purposes.

LAMC Section 64.15 requires that the City perform a Sewer Capacity Availability Review (SCAR) when: (1) a sewer permit is required to connect to the City's sewer collection system; (2) additional discharge is proposed into an existing public sewer connection; or (3) a future sewer connection or future development is proposed that would generate 10,000 gallons or more of sewage per day. A SCAR determines if there is adequate capacity existing in the sewer collection system to safely convey the newly generated sewage to the appropriate sewage treatment plant.

In addition, the City of Los Angeles Bureau of Engineering Special Order No. SO06-0691 sets forth design criteria for sewer systems requiring hat trunk, interceptor, outfall, and relief sewers (i.e. sewers that are 18 inches or greater in diameter) be designed for a planning period of 60 to 100 years, and lateral sewers (sewers that are less than 18 inches in diameter) be designed for a planning period of 100 years. The order also requires that sewers be designed so that the peak dry weather flow depth, during their planning period, shall not exceed 50 percent of the pipe diameter.

b. Existing Conditions

(1) Wastewater Generation

As discussed in Section II, Project Description, of this Draft EIR, the Project Site is currently occupied by three existing multi-family residential developments totaling 43,939 square feet, including 112 residential units comprised of 95 studio units, 15 one-bedroom units, and two two-bedroom units. The Project would remove the 43,939 square feet of existing residential use to accommodate the Project. Existing wastewater generation for the Project Site was calculated using standard wastewater generation rates from the City of Los Angeles Bureau of Sanitation (LASAN). Based on these rates, the total existing average daily wastewater flow is approximately

16,800 gallons per day (gpd), as shown in Table IV.K.2-2 on page IV.K.2-13 in the analysis below.

(2) Wastewater Infrastructure

Sanitary sewer service to and from the Project area is owned and operated by the City of Los Angeles. The existing wastewater collection system includes more than 6,700 miles of public sewers, which serves a population of more than four million people and conveys approximately 400 million gallons per day (mgd) to the City's four wastewater treatment and water reclamation plants.[9]

As discussed in the Utility Report, included in Appendix J of this Draft EIR, there is an existing 8-inch sewer main within Bellwood Avenue, which the northerly and southerly portions of the Project Site tie into. Based on available record data from the City, there are currently ten existing sewer laterals connecting the 8-inch line in Bellwood Avenue to the Project Site. Two of these laterals serve the northernly portions of the Project Site, and the other eight serve the southernly portions of the Project Site. The 8-inch line in Bellwood Avenue then flows northwesterly to a 10-inch main within Olympic Boulevard and then continues southwesterly along Olympic Boulevard. There is also an 8-inch sewer line south of the Project Site, which the neighboring properties to the south tie into. This 8-inch line flows southwesterly, tying into an 8-inch line in Kerwood Avenue, and then ties into the 10-inch main in Olympic Boulevard. These sewer mains/lines connect to a network of sewer lines that ultimately convey wastewater to the Hyperion Water Reclamation Plant (HWRP).

(3) Wastewater Treatment

The Los Angeles Bureau of Sanitation (LASAN) is responsible for the operation of wastewater treatment facilities in the City. The main purpose of these treatment facilities is to remove potential pollutants from sewage in order to protect river and marine environments and public health. LASAN divides the wastewater treatment system of the City into two major service areas: the Hyperion Service Area and the Terminal Island Service Area.[10] The Hyperion Service Area is serviced by the Hyperion Sanitary Sewer System, which consists of the Hyperion Water Reclamation Plant (HWRP), the Donald C. Tillman Water Reclamation Plant, and the Los Angeles–Glendale Water Reclamation

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[9] *LASAN, Sewers, www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-s?_adf.ctrl-state=w3f8ikamv_4&_afrLoop=18666739916391336#!, accessed October 15, 2020.*

[10] *LASAN, Clean Water, www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw?_adf.ctrl-state=ljvz6q49_5&_afrLoop=8241807351592071#!, accessed October 15, 2020.*

Plant.[11] The Terminal Island Service Area is served by the Terminal Island Treatment Plant.[12] The Project Site is located within the Hyperion Service Area.

(a) Hyperion Service Area

As shown in Table IV.K.2-1 on page IV.K.2-8, the existing design capacity of the Hyperion Sanitary Sewer System is approximately 550 mgd (consisting of 450 mgd at the HWRP,[13] 80 mgd at the Donald C. Tillman Water Reclamation Plant,[14] and 20 mgd at the Los Angeles–Glendale Water Reclamation Plant[15]). Based on the One Water LA 2040 Plan–Wastewater Facilities Plan, the average wastewater flow rate in the Hyperion Sanitary Sewer System was 314 mgd in 2016 (consisting of 250 mgd at the HWRP, 47 mgd at the Donald C. Tillman Water Reclamation Plant, and 17 mgd at the Los Angeles–Glendale Water Reclamation Plant).[16] The One Water LA 2040 Plan–Wastewater Facilities Plan projects that annual average wastewater flows in the Hyperion Sanitary Sewer System would increase to 323 mgd in 2020, 348 mgd in 2030, and 358 mgd in 2040. As such, current and projected flows are below the design capacity of approximately 550 mgd for the Hyperion Sanitary Sewer System.

(b) Hyperion Water Reclamation Plant

As discussed above, wastewater generated from the Project Site is conveyed via the local collector sanitary sewer system directly to the HWRP for treatment. As shown in Table IV.K.2-1, the HWRP has the capacity to treat approximately 450 mgd of wastewater for full secondary treatment and currently treats approximately 275 mgd.[17] As such, the

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[11] *LASAN, Clean Water, www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw?_adf.ctrl-state=ljvz6q49_5&_afrLoop=8241807351592071#!, accessed October 15, 2020.*

[12] *LASAN, Clean Water, www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw?_adf.ctrl-state=ljvz6q49_5&_afrLoop=8241807351592071#!, accessed October 15, 2020.*

[13] *LASAN, Water Reclamation Plants, Hyperion Water Reclamation Plant, www.lacitysan.org/san/faces/wcnav_externalId/s-lsh-wwd-cw-p-hwrp?_adf.ctrl-state=vm8qwyj80_4&_afrLoop=18606279438697733#!, accessed October 15, 2020.*

[14] *LASAN, Water Reclamation Plants, Donald C. Tillman Water Reclamation Plant, www.lacitysan.org/san/faces/wcnav_externalId/s-lsh-wwd-cw-p-dctwrp?_adf.ctrl-state=1brav2vyj0_742&_afrLoop=4195638867182484#!, accessed October 15, 2020.*

[15] *LASAN, Water Reclamation Plants, Los Angeles–Glendale Water Reclamation Plant, www.lacitysan.org/san/faces/wcnav_externalId/s-lsh-wwd-cw-p-lagwrp?_adf.ctrl-state=1brav2vyj0_564&_afrLoop=4195912200544472#!, accessed October 15, 2020.*

[16] *LASAN, One Water LA 2040 Plan—Volume 2: Wastewater Facilities Plan, April 2018.*

[17] *LASAN, Hyperion Water Reclamation Plant, www.lacitysan.org/san/faces/wcnav_externalId/s-lsh-wwd-cw-p-hwrp?_adf.ctrl-state=grj40dmqj_1780&_afrLoop=3950078628628745#!, accessed October 15, 2020.*

Table IV.K.2-1
Existing Capacity of Hyperion Service Area

	Design Capacity (mgd)
Hyperion Water Reclamation Plant	450
Donald C. Tillman Water Reclamation Plant	80
Los Angeles–Glendale Water Reclamation Plant	20
Total	**550**

mgd = million gallons per day
Source: LASAN, Water Reclamation Plans, www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p?_adf.ctrl-state=ja8bqrb52_5&_afrLoop=6972769757513469#!, accessed October 15, 2020.

HWRP is currently operating at approximately 61 percent of its capacity with a remaining available capacity of approximately 175 mgd.

Incoming wastewater to the treatment plant initially passes through screens and basins to remove coarse debris and grit. This is followed by primary treatment, which is a physical separation process where heavy solids settle to the bottom of tanks while oil and grease float to the top. These solids, called sludge, are collected, treated, and recycled. The portion of water that remains, called primary effluent, is treated through secondary treatment using a natural, biological approach. Living micro-organisms are added to the primary effluent to consume organic pollutants. These micro-organisms are later harvested and removed as sludge.[18] The treated water from the HWRP is discharged through a 5-mile outfall pipe at a depth of 190 feet into the Santa Monica Bay and Pacific Ocean.[19] The discharge from the HWRP into Santa Monica Bay is regulated by the HWRP's National Pollutant Discharge Elimination System (NPDES) Permit issued under the Clean Water Act and is required to meet the Regional Water Quality Control Board's requirements for a recreational beneficial use.[20] Accordingly, the HWRP's effluent that is released to Santa

[18] *LASAN, Hyperion Water Reclamation Plant, www.lacitysan.org/san/faces/wcnav_externalId/s-lsh-wwd-cw-p-hwrp?_adf.ctrl-state=grj40dmqj_1780&_afrLoop=3950078628628745#!, accessed October 15, 2020.*

[19] *LASAN, Hyperion Virtual Tour, Hyperion Treatment Plant Tour, Ocean Outfall into the Bay, www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p/s-lsh-wwd-cw-p-hwrp/s-lsh-au-h?_adf.ctrl-state=ljvz6q49_596&_afrLoop=8243477885026291#!, accessed October 15, 2020.*

[20] *California Regional Water Quality Control Board, Los Angeles Region, Order No. R4-2010-0200, NPDES No. CA0109991, Waste Discharge Requirements and National Pollutant Discharge Elimination System Permit for the City of Los Angeles, Hyperion Treatment Plant Discharge to the Pacific Ocean, www.lacitysan.org/san/sandocview?docname=cnt010051, accessed October 15, 2020.*

Monica Bay is continually monitored to ensure that it meets or exceeds prescribed standards. LASAN also monitors flows into the Santa Monica Bay.[21]

3. Project Impacts

a. Thresholds of Significance

In accordance with the State CEQA Guidelines Appendix G, the Project would have a significant impact related to wastewater if it would:

Threshold (a): Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction or relocation of which would cause significant environmental effects; or[22]

Threshold (b): [Not] result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

For this analysis, the Appendix G Thresholds listed above are relied upon. The analysis utilizes factors and considerations identified in the City's L.A. CEQA Thresholds Guide, as appropriate to assist in answering the Appendix G Thresholds. Refer to Section IV.K.1, Utilities and Service Systems—Water Supply of this Draft EIR for a discussion of water infrastructure; Section IV.K.3, Utilities and Service Systems—Energy Infrastructure of this Draft EIR for a discussion of electric power and natural gas infrastructure; and Section VI, Other CEQA Considerations for a discussion of stormwater and telecommunications facility infrastructure.

The L.A. CEQA Thresholds Guide states that the determination of significance shall be made on a case-by-case basis, considering the following factors to evaluate wastewater impacts:

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[21] *LASAN, Environmental Monitoring www.lacitysan.org/san/faces/wcnav_externalId/s-lsh-wwd-wp-ec-em?_adf.ctrl-state=xsmd2kqwx_131&_afrLoop=21105064772207683#!, accessed October 15, 2020.*

[22] *Refer to Section IV.K.1, Utilities and Service Systems—Water Supply of this Draft EIR for a discussion of water infrastructure; Section IV.K.3, Utilities and Service Systems—Energy Infrastructure of this Draft EIR for a discussion of electric power and natural gas infrastructure; and Section VI, Other CEQA Considerations for a discussion of stormwater and telecommunications facility infrastructure.*

- The project would cause a measurable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained; or

- The project's additional wastewater flows would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan or General Plan and its elements.[23]

b. Methodology

The analysis of Project impacts on wastewater infrastructure and treatment capacity is based on the Utility Report included in Appendix J of this Draft EIR. The Utility Report calculates the anticipated wastewater flows to be generated by the Project using wastewater generation factors provided by LASAN. Given the existing capacity of the Project Site's sanitary sewer system and the Project Site's future demand, an assessment was made of the impacts to the sanitary sewers and the City's downstream sewers and treatment plants. Data regarding the existing physical features and capacity of the system is based on information provided by LASAN and included in the Utility Report.

To evaluate potential impacts relative to wastewater treatment capacity, this analysis evaluates whether adequate treatment capacity within the Hyperion Service Area would be available to accommodate the Project based on the estimate of the Project's wastewater generation and data from LASAN. For the assessment of cumulative impacts on wastewater treatment, the projected cumulative wastewater generation is compared to the estimated available capacity of the Hyperion Service Area in 2023, the Project's buildout year.

c. Project Design Features

No specific project design features are proposed with regard to wastewater.

d. Analysis of Project Impacts

Threshold (a): Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications

[23] *The Wastewater Facilities Plan referenced in the L.A. City CEQA Thresholds Guide has since been superseded by the Integrated Resources Plan.*

facilities, the construction or relocation of which could cause significant environmental effects?[24]

(1) Impact Analysis

(a) Construction

Construction activities for the Project would result in wastewater generation from construction workers on-site. However, wastewater generation during construction of the Project would be temporary and nominal when compared with the Project Site wastewater generation under existing conditions. Furthermore, construction workers would typically utilize portable restrooms and hand wash areas, which would not contribute to wastewater flows to the City's wastewater system. Thus, wastewater generation from Project construction activities would not cause a measurable increase in wastewater flows.

The Project would require the abandonment and removal of the existing 325 feet of 8-inch sewer line within Bellwood Avenue on the Project Site and adjacent on-site lateral lines as well as construction of on-site wastewater infrastructure to serve the new building, and potential limited extension/upgrade and/or relocation of existing adjacent public wastewater infrastructure. These construction activities would primarily be confined to trenching and would be limited to the on-site wastewater distribution as well as minor off-site work associated with connections to the public main. Therefore, as discussed in Section IV.I, Transportation, of this Draft EIR, a Construction Traffic Management Plan would be implemented during Project construction pursuant to Project Design Feature TR-PDF-1 to reduce any temporary pedestrian and traffic impacts. The Construction Traffic Management Plan would ensure safe pedestrian access and vehicle travel in general, and emergency vehicle access, in particular, throughout the construction period. Overall, when considering impacts resulting from the installation of any required wastewater infrastructure, impacts would be of a relatively short-term duration and would cease to occur once the installation is complete.

As such, Project construction would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects. Therefore, Project construction impacts to the wastewater conveyance or treatment system would be less than significant.

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[24] *Refer to Section IV.K.1, Utilities and Service Systems—Water Supply of this Draft EIR for a discussion of water infrastructure; Section IV.K.3, Utilities and Service Systems—Energy Infrastructure of this Draft EIR for a discussion of electric power and natural gas infrastructure; and Section VI, Other CEQA Considerations for a discussion of stormwater and telecommunications facility infrastructure.*

(b) Operation

Wastewater generated by the Project would be conveyed via the existing wastewater conveyance systems for treatment at the HWRP. As described above, the HWRP has a capacity of 450 mgd and current average wastewater flows are at approximately 275 mgd. Accordingly, the remaining available capacity at the HWRP is approximately 175 mgd. As shown in Table IV.K.2-2 on page IV.K.2-13, the Project would generate a net increase in wastewater flow from the Project Site of approximately 25,941 gpd, or approximately 0.026 mgd. (This is a conservative estimate as it does not account for water conservation measures such as the mandatory indoor water reduction rates required by the City of Los Angeles Green Building Code.) As discussed in more detail below, this net increase in wastewater would represent approximately 0.015 percent[25] of the current 175 mgd of remaining available capacity of the HWRP.

As discussed in the Utility Report, with the proposed realignment of Bellwood Avenue on the Project Site, sewer service for the Project would be provided utilizing new on-site sewer connections to the existing sewer lines adjacent to the Project Site. A request for Wastewater Service Information, included in the Utility Report (see Attachment D of Appendix J of this Draft EIR), was obtained from LASAN to evaluate the capability of the existing wastewater system to serve the Project's estimated wastewater flow. Based on the current approximate flow levels and design capacities in the sewer system and the Project's estimated wastewater flow, the City determined that the existing capacity of the sewer system may be able to accommodate the additional wastewater infrastructure demand created by the Project. Further detailed gauging and evaluation, as required by LAMC Section 64.14, would be conducted to obtain final approval of sewer capacity and connection permit for the Project during the Project's permitting process. In addition, Project-related sanitary sewer connections and on-site infrastructure would be designed and constructed in accordance with applicable LASAN and California Plumbing Code standards. Therefore, the Project would not cause a measurable increase in wastewater flows at a point where, and at a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained.

Based on the above, operation of the Project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects. Therefore, operational impacts to the wastewater conveyance or treatment system would be less than significant.

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[25] *(25,941 gpd ÷ 175 mgd) x 100 = 0.014823 (~0.015%)*

Table IV.K.2-2
Estimated Project Wastewater Generation

Land Use	Units	Generation Rate (gpd/unit) [a,b]	Wastewater Generation (gpd)
Existing Uses to be Removed			
Residential	112 unit	150	16,800
Total Existing to be Removed			***16,800***
Proposed			
Senior Independent Units	71 unit	110	7,810
Assisted Living Guest Rooms	75 unit	110	8,250
Memory Care Guest Rooms	46 unit	110	5,060
Indoor Common Areas	50,463 sf	0.05	2,523
Outdoor Common Areas	14,630 sf	0.05	732
Indoor Swimming Pool	1 unit	16,458	16,458
Indoor Spa	1 unit	1,908	1,908
Total Proposed Wastewater Flow			**42,741**
Total Existing Wastewater Flow			***16,800***
Project Net Wastewater Flow (Proposed – Existing)			**25,941**

gpd = gallons per day
sf = square feet
Note: Some numbers do not add up perfectly due to rounding.
[a] Based on 2012 LASAN Sewer Generation Rates.
[b] *Based on correspondence from BOS to Department of City Planning regarding the projected wastewater discharges for the proposed Project dated July 11, 2019.*
Source: Fuscoe Engineering, Inc, Water, Sewer, and Energy Infrastructure Assessment Report—Senior Residential Community at the Bellwood; Eyestone Environmental, 2021.

(2) Mitigation Measures

Project-level impacts related to the construction of expansion of wastewater facilities would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to wastewater treatment facilities were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

Threshold (b): Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

(1) Impact Analysis

As shown in Table IV.K.2-2 on page IV.K.2-13, the Project would generate a net increase in wastewater flow from the Project Site of approximately 25,941 gpd, or approximately 0.026 mgd.[26] The Project's increase in average daily wastewater flow of 0.026 mgd would represent approximately 0.015 percent[27] of the current 175 mgd of remaining available capacity of the HWRP. Therefore, wastewater generated by the Project would be accommodated by the existing capacity of the HWRP.

Various factors, including future development of new treatment plants, upgrades and improvements to existing treatment capacity, development of new technologies, etc., will ultimately determine the available capacity of the Hyperion Service Area in 2023, the year by which construction of the Project is expected to be completed. Future updates to the One Water LA 2040 Plan discussed above would provide for improvements beyond 2040 to serve future population needs. It is conservatively assumed that no new improvements to the wastewater treatment plants would occur prior to 2023. Thus, based on this conservative assumption, the 2023 effective capacity of the Hyperion Sanitary Sewer System would continue to be 550 mgd. Similarly, the capacity of the HWRP in 2023 would continue to be 450 mgd.

Based on LASAN's average flow projections for the HWRP, it is anticipated that average flows in 2023, the Project build-out year, would be approximately 261.7 mgd.[28] Accordingly, the future remaining available capacity in 2023 would be approximately 188.3 mgd. The Project's increase in average daily wastewater flow of 0.026 mgd would represent approximately 0.014 percent of the estimated future remaining available capacity 188.3 mgd at the HWRP.[29] Therefore, wastewater generated under the Project would be accommodated by the future capacity of the HWRP.

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[26] *25,941 gpd ÷ 1 mgd = 0.025941 (~0.026 mgd)*

[27] *(25,941 gpd ÷ 175 mgd) x 100 = 0.014823 (~0.015%)*

[28] *Los Angeles Department of Water and Power, One Water LA 2040 Plan-Volume 2, Table ES.1, Projected Wastewater Flows. Based on a straight-line interpolation of the projected flows for the Hyperion Water Reclamation Plant for 2020 (approximately 256 mgd) and 2030 (approximately 275 mgd). The 2023 value is extrapolated from 2020 and 2030 values: [(275 mgd – 256 mgd) ÷ 10) * 3] + 256 = ~ 261.7 mgd.*

[29] *(25,941 gpd ÷ 188.3 mgd) x 100 = 0.013776 (~0.014%)*

Additionally, the Project's net increase in average daily wastewater generation of 0.026 mgd plus the current average flows of approximately 275 mgd to the HWRP would represent approximately 61.1 percent[30] of the HWRP's capacity of 450 mgd. With regard to future flows, the Project's net increase of 0.026 mgd plus the projected flows of approximately 261.7 mgd to the HWRP would also represent approximately 58.2 percent[31] of the HWRP's assumed future capacity of 450 mgd. Furthermore, as previously discussed, a request for Wastewater Service Information, included in the Utility Report (see Attachment D of Appendix J of this Draft EIR), was obtained from LASAN to evaluate the capability of the existing wastewater system to serve the Project's estimated wastewater flow. As concluded in the Wastewater Service Information, HWRP would be able to accommodate the increased flow from the Project.

Based on the above, there is adequate treatment capacity to serve the Project's projected demand in addition to existing LASAN commitments. As such, the Project would result in a determination by the wastewater treatment provider, which serves or may serve the Project, that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments, and impacts would be less than significant.

(2) Mitigation Measures

Project-level impacts related to wastewater treatment facilities would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to wastewater treatment facilities were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

e. Cumulative Impacts

(1) Impact Analysis

The geographic context for the cumulative impact analysis on the wastewater conveyance system is the area that includes the Project Site and the related projects that would potentially utilize the same infrastructure as the Project. The geographic context for the cumulative impact analysis on wastewater treatment facilities is the Hyperion Service

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30 *[(25,941 gpd + 275 mgd) ÷ 450 mgd] x 100 = 61.11 (~ 61.1%)*

31 *[(25,941 gpd + 261.7 mgd) ÷ 450 mgd] x 100 = 58.16 (~ 58.2%)*

Area. The Project, in conjunction with growth forecasted in the Hyperion Service Area through 2023 (i.e., the Project buildout year), would generate wastewater, potentially resulting in cumulative impacts on wastewater conveyance and treatment facilities. Cumulative growth in the greater Project area through 2023 includes specific known development projects, as well as general ambient growth projected to occur.

As discussed in Section III, Environmental Setting, of this Draft EIR, the projected growth reflected by Related Project Nos. 1 through 6 is a conservative assumption, as some of the related projects may not be built out by 2023 (i.e., the Project buildout year), may never be built, or may be approved and built at reduced densities. To provide a conservative forecast, the future baseline forecast assumes that Related Project Nos. 1 through 6 are fully built out by 2023, unless otherwise noted.

(a) Wastewater Infrastructure

As with the Project, new development projects occurring in the vicinity of the Project Site would be required to coordinate with LASAN via a sewer capacity availability request to determine adequate sewer capacity. In addition, new development projects would also be subject to LAMC Sections 64.11 and 64.12, which require approval of a sewer permit prior to connection to the sewer system. In order to connect to the sewer system, related projects in the City of Los Angeles would also be subject to payment of the City's Sewerage Facilities Charge. Payment of such fees would help to offset the costs associated with infrastructure improvements that would be needed to accommodate wastewater generated by overall future growth. If system upgrades are required as a result of a given project's additional flow, arrangements would be made between the related project and LASAN to construct the necessary improvements, similar to the Project. Furthermore, like the Project, each related project would be required to comply with applicable water conservation programs, including the City of Los Angeles Green Building Code. In addition, as with the Project, related projects would be required to implement construction management plans to ensure that adequate and safe access remains available during construction activities. Such construction management plans would also ensure that appropriate construction traffic control measures (e.g., detour signage, delineators, etc.) would be implemented, as necessary, to ensure emergency access and traffic flow is maintained on adjacent right-of-ways. **Therefore, the Project and related projects would not result in significant cumulative impacts related to the construction or expansion of wastewater infrastructure. As such, the Project's contribution would not be cumulatively considerable, and cumulative impacts would be less than significant.**

(b) Wastewater Treatment

Development of the Project, in conjunction with the related projects, would result in an increase in the demand for sanitary sewer service in Hyperion Service Area. As

identified in Section III, Environmental Setting, of this Draft EIR, there are 6 related projects located in the Project Site vicinity. Assuming that each of these related projects would connect to some or all of the City sewers serving the Project Site, forecasted growth from the related projects would generate an average daily wastewater flow of approximately 358,540 gpd or approximately 0.36 mgd, as shown in Table IV.K.2-3 on page IV.K.2-18. Combined with the Project's net increase in wastewater generation of 25,941 gpd (0.026 mgd), this equates to a cumulative increase in average daily wastewater flow of approximately 384,481 gpd, or 0.38 mgd.

Based on LASAN's average flow projections for the Hyperion Sanitary Sewer System, it is anticipated that the average flow in 2023 would be approximately 330.5 mgd.[32] In addition, the Hyperion Sanitary Sewer System's total treatment capacity is conservatively estimated to be approximately 550 mgd in 2023, which is the same as its existing capacity.

The Project wastewater flow of approximately 0.026 mgd combined with the wastewater flow from related projects flow of approximately 0.36 mgd and the forecasted 2023 wastewater flow of 330.5 mgd for the Hyperion Sanitary Sewer System would result in a total cumulative wastewater flow of approximately 330.9 mgd. Based on the Hyperion Sanitary Sewer System's estimated future capacity of approximately 550 mgd, the Sanitary Sewer System is expected to have adequate capacity to accommodate the wastewater flow of approximately 330.9 mgd aggregated from the Project, related projects, and forecasted growth by 2023. The 0.38 mgd of cumulative plus Project wastewater would represent approximately 0.07 percent of the Sanitary Sewer System's existing design capacity of 550 mgd.

Furthermore, as previously stated, the One Water LA Plan provides an integrated approach to Citywide recycled water supply, wastewater treatment, and stormwater management based on water demand projections through 2040. The Wastewater Facilities Plan, which is included in Volume 2 of the One Water LA Plan, describes the City's existing wastewater collection and water reclamation plants, as well as the recommended improvements to meet future flow conditions. As stated therein, based on the design capacities and the projected future flows through the year 2040, it is anticipated that the

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[32] *Los Angeles Department of Water and Power, One Water LA 2040 Plan, Volume 2, Table ES.1, Projected Wastewater Flows. Based on a straight-line interpolation of the projected flows for the Hyperion Service Area (which is comprised of the Hyperion Water Reclamation Plant, the Donald C. Tillman Water Reclamation Plant, and the Los Angeles-Glendale Water Reclamation Plant) for 2020 (approximately 323 mgd) and 2030 (approximately 348 mgd). The 2023 value is extrapolated from 2020 and 2030 values: : [(348 mgd – 323 mgd) ÷ 10) * 3] + 323 = 330.5 mgd.*

Table IV.K.2-3
Cumulative Wastewater Generation

No.	Project	Land Use	Size	Generation Rate[a,b]	Wastewater Generation (gpd)
1	Westfield Century City New Century Plan Project 10250 Santa Monica Boulevard, 1801 Avenue of the Stars, and 1930 Century Park West Street	Condominiums	262 du	190 gpd/du	49,780
		Shopping Center	358,881 sf	0.05 gpd/sf	17,944
2	Century City Center[c] 1950 S. Avenue of the Stars	Office	725,830 sf	0.12 gpd/sf	87,100
		Retail	4,120 sf	0.025 gpd/sf	103
		Mobility Hub	1,300 sf		—
3	Apartments 10306 W. Santa Monica Boulevard	Apartments	116 du	190 gpd/du	22,040
4	Century Plaza (Hyatt Regency Hotel) 2025 S. Avenue of the Stars	Condominiums	193 du	190 gpd/du	36,670
		Hotel	240 rm	120 gpd/rm	28,800
		Office	117,647 sf	0.12 gpd/sf	14,118
		Retail	93,814 sf	0.025 gpd/sf	2,345
		Spa/Fitness[d]	16,800 sf	0.65 gpdsf	10,920
		Restaurant (15,463 sf)[e]	516 seat	30 gpdseat	15,480
5	Apartments 10400 W. Santa Monica Boulevard	Apartments	96 du	190 gpd/du	18,240
6	Fox Studios Master Plan 2016 10201 W. Pico Boulevard	Commercial (may include creative office, specialty space, stage space, and facility and utility support)	1,100,000 sf	0.05 gpd/sf	55,000
Related Projects Wastewater Generation					**358,540**
Project Net Wastewater Generation					**25,941**
Total Wastewater Generation for Related Projects and Project					**384,481**

Table IV.K.2-3 (Continued)
Cumulative Wastewater Generation

No.	Project	Land Use	Size	Generation Rate[a,b]	Wastewater Generation (gpd)

du = dwelling units

gpd = gallons per day

rm = rooms

sf = square feet

[a] *This analysis is based on sewage generation rates provided by LASAN's Sewerage Facilities Charge, Sewage Generation Factor for Residential and Commercial Categories, effective April 6, 2012.*

[b] *This analysis conservatively assumes that all dwelling units are 3-bedroom units.*

[c] *The related project information reflects the modified Century City Center project that was entitled in January 2015 as part of the Final Subsequent Environmental Impact Report. An alternative residential project, which proposes the development of 483 dwelling units, was also entitled for this site. Based on 2012 LASAN Sewer Generation Rates, the proposed alternative would generate a wastewater flow of approximately 91,770 gpd, as compared to the 87,203 gpd shown above. Based on the Hyperion Sanitary Sewer System's estimated future capacity, the Sanitary Sewer System is expected to have adequate capacity to accommodate the additional wastewater flow generated by the alternative residential project.*

[d] *The rate of 650 gallons per 1,000 square feet for "Health Club/Spa" is applied.*

[e] *Restaurant space is assumed to be all full-service restaurant and assumed to be equivalent to 30 sf per seat for a conservative estimate.*

Source: Gibson Transportation Consulting, Inc., 2020; Eyestone Environmental, 2021.

existing Hyperion Sanitary Sewer System would have sufficient capacity to manage wastewater flows.[33]

Therefore, the Project and related projects would not result in significant cumulative impacts related to wastewater treatment. As such the Project's contribution would not be cumulatively considerable, and cumulative impacts would be less than significant.

(2) Mitigation Measures

Cumulative impacts related to wastewater generation, treatment, and infrastructure would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts related to wastewater generation, treatment, and infrastructure were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

[33] *Los Angeles Department of Water and Power, One Water LA 2040 Plan, Executive Summary, p. ES-20.*

IV. Environmental Impact Analysis

K.3 Utilities and Service Systems—Energy Infrastructure

1. Introduction

This section of the Draft EIR analyzes the Project's potential impacts on electricity and natural gas infrastructure. The information presented herein is based, in part, on the *Energy Calculations for Senior Residential Community at the Bellwood Project* prepared by Eyestone Environmental and the *Senior Residential Community at The Bellwood—Water, Sewer, and Energy Infrastructure Assessment Report* (Utility Report) prepared by Fuscoe Engineering Inc (February 2020), which are included as Appendix D and Appendix J of this Draft EIR, respectively.

2. Environmental Setting

a. Regulatory Framework

(1) Federal

The United States Department of Energy (DOE) is the federal agency responsible for establishing policies regarding energy conservation, domestic energy production and infrastructure. The Federal Energy Regulatory Commission (FERC) is an independent federal agency, officially organized as part of the DOE which is responsible for regulating interstate transmission of natural gas, oil and electricity, reliability of the electric grid and approving of construction of interstate natural gas pipelines and storage facilities. The Energy Policy Act of 2005 has also granted FERC with additional responsibilities of overseeing the reliability of the nation's electricity transmission grid and supplementing state transmission siting efforts in national interest electric transmission corridors.

FERC has authority to oversee mandatory reliability standards governing the nation's electricity grid. FERC has established rules on certification of an Electric Reliability Organization (ERO) which establishes, approves and enforces mandatory electricity reliability standards. The North American Electric Reliability Corporation (NERC) has been certified as the nation's ERO by FERC to enforce reliability standards in all interconnected jurisdictions in North America.

Although FERC regulates the bulk energy transmission and reliability throughout the United States, the areas outside of FERC's jurisdictional responsibility include state level regulations and retail electricity and natural gas sales to consumers which falls under the jurisdiction of state regulatory agencies.

(2) State

California energy infrastructure policy is governed by three institutions: the California Independent System Operator (California ISO), the California Public Utilities Commission (CPUC), and the California Energy Commission (CEC). These three agencies share similar goals but have different roles and responsibilities in managing the State's energy needs.

The majority of state regulations with respect to electricity and natural gas pertain to energy conservation. For a discussion of these regulations, refer to Section IV.C, Energy, of this Draft EIR. There are, however, regulations pertaining to infrastructure. These are discussed further below.

(a) California Independent System Operator

The California ISO is an independent public benefit corporation responsible for operating California's long-distance electric transmission lines. The California ISO is led by a five-member board appointment by the Governor and is also regulated by FERC. While transmission owners and private electric utilities own their lines, the California ISO operates the transmission system independently to ensure that electricity flows comply with federal operational standards. The California ISO analyzes current and future electrical demand and plans for any needed expansion or upgrade of the electric transmission system.

(b) California Public Utilities Commission

The CPUC establishes policies and rules for electricity and natural gas rates provided by private utilities in California such as Southern California Edison (SCE), Southern California Gas Company (SoCalGas), and San Diego Gas and Electric (SDG&E). Public owned utilities such as the Los Angeles Department of Water and Power (LADWP) do not fall under the CPUC's jurisdiction.

The CPUC is overseen by five commissioners appointed by the Governor and confirmed by the state Senate. The CPUC's responsibilities include regulating electric power procurement and generation, infrastructure oversight for electric transmission lines and natural gas pipelines and permitting of electrical transmission and substation facilities.

(c) California Energy Commission

The CEC is a planning agency which provides guidance on setting the state's energy policy. Responsibilities include forecasting electricity and natural gas demand, promoting and setting energy efficiency standards throughout the state, developing renewable energy resources and permitting thermal power plants 50 megawatts and larger. The CEC also has regulatory specific regulatory authority over publicly owned utilities to certify, monitor and verify eligible renewable energy resources procured.

(d) Senate Bill 1389

Senate Bill (SB) 1389 (Public Resources Code Sections 25300–25323), adopted in 2002, requires the development of an integrated plan for electricity, natural gas, and transportation fuels. Under the bill, the CEC must adopt and transmit to the Governor and Legislature an Integrated Energy Policy Report every two years. In 2018, the CEC decided to write the Integrated Energy Policy Report in two volumes. Volume I, which was published on August 1, 2018, highlights the implementation of California's innovative polices and the role they have played in moving toward a clean energy economy. Volume II, which was adopted in February 2019, identifies several key energy issues and actions to address these issues and ensure the reliability of energy resources.[1]

(3) Regional

There are no regional regulations with respect to electricity and natural gas infrastructure. For a discussion of regional regulations pertaining to energy conservation, refer to Section IV.C, Energy, of this Draft EIR.

(4) Local

There are no local regulations with respect to electricity and natural gas infrastructure. For a discussion of local regulations pertaining to energy conservation, refer to Section IV.C, Energy, of this Draft EIR.

b. Existing Conditions

(1) Electricity

The Los Angeles Department of Water and Power (LADWP) provides electrical service throughout the City of Los Angeles and many areas of the Owens Valley, serving

[1] *California Energy Commission, 2018 Integrated Energy Policy Report Update, Volume II, February 2019.*

approximately four million people within a service area of approximately 465 square miles, excluding the Owens Valley. Electrical service provided by the LADWP is divided into two planning districts: Valley and Metropolitan. The Valley Planning District includes the LADWP service area north of Mulholland Drive, and the Metropolitan Planning District includes the LADWP service area south of Mulholland Drive. The Project Site is located within LADWP's Metropolitan Planning District.

LADWP generates power from a variety of energy sources, including hydropower, coal, gas, nuclear sources, and renewable resources, such as wind, solar, and geothermal sources. According to LADWP's 2017 Power Strategic Long-Term Resources Plan, the LADWP has a net dependable generation capacity greater than 7,531 MW.[2] In 2017, the LADWP power system experienced an instantaneous peak demand of 6,432 MW.[3] Approximately 32 percent of LADWP's 2018 electricity purchases were from renewable sources, which is similar to the 31 percent statewide percentage of electricity purchases from renewable sources.[4]

LADWP supplies electrical power to the Project Site from electrical service lines located in the Project vicinity. As described in the Utility Report, the Project Site receives electric power service from LADWP via an existing underground electrical line running along Olympic Boulevard.

Existing electricity usage was estimated based on the same methodology contained in the greenhouse gas (GHG) analysis included in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR (California Emissions Estimator Model [CalEEMod] Version 2016.3.2). It is estimated that existing uses on the Project Site currently consume approximately 683,895 kWh of electricity per year.[5]

(2) Natural Gas

Natural gas is provided to the Project Site by the Southern California Gas Company (SoCalGas). SoCalGas is the principal distributor of natural gas in Southern California, serving residential, commercial, and industrial markets. SoCalGas serves approximately 21.8 million customers in more than 500 communities encompassing approximately

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[2] *LADWP, 2017 Power Strategic Long-Term Resources Plan.*

[3] *LADWP, 2017 Retail Electric Sales and Demand Forecast, p. 6.*

[4] *California Energy Commission, Utility Annual Power Content Labels for 2018.*

[5] *Eyestone Environmental, Energy Calculations for Senior Residential Community at the Bellwood Project. See Appendix D of this Draft EIR.*

24,000 square miles throughout Central and Southern California, from the City of Visalia to the Mexican border.[6]

SoCalGas receives gas supplies from several sedimentary basins in the western United States and Canada, including supply basins located in New Mexico (San Juan Basin), West Texas (Permian Basin), the Rocky Mountains, and Western Canada, as well as local California supplies.[7] The traditional, southwestern United States sources of natural gas will continue to supply most of SoCalGas' natural gas demand. The Rocky Mountain supply is available but is used as an alternative supplementary supply source, and the use of Canadian sources provide only a small share of SoCalGas supplies due to the high cost of transport.[8] Gas supply available to SoCalGas from California sources averaged 323 million cf per day in 2017 (the most recent year for which data are available).[9]

SoCalGas supplies natural gas to the Project Site from natural gas service lines located in the Project vicinity. As described in the Utility Report, the Project Site receives natural gas service via a 3-inch gas line fronting 16-feet west of the centerline of Bellwood Avenue.[10] It is estimated that existing uses on the Project Site currently consume approximately 1,947,257 cf of natural gas per year.[11]

3. Project Impacts

This analysis addresses the Project's potential impacts on electricity and natural gas infrastructure. The Project's estimated energy consumption was calculated using CalEEMod Version 2016.3.2.

a. Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the Project would have a significant impact related to energy infrastructure if it would:

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6 *SoCalGas, Company Profile, www.socalgas.com/about-us/company-info.shtml, accessed January 15, 2021.*

7 *California Gas and Electric Utilities, 2020 California Gas Report, pp. 144–145.*

8 *California Gas and Electric Utilities, 2020 California Gas Report, pp. 144–145.*

9 *California Gas and Electric Utilities, 2020 California Gas Report, pp. 144–145.*

10 *Fuscoe Engineering Inc., Senior Residential Community at The Bellwood Water, Sewer, and Energy Infrastructure Assessment Report, February 2020. Refer to Appendix J of this Draft EIR.*

11 *Eyestone Environmental, Energy Calculations for the Senior Residential Community at the Bellwood Project. See Appendix D of this Draft EIR.*

Threshold (a): Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

For this analysis, the Appendix G Thresholds listed above are relied upon. The analysis utilizes factors and considerations identified in the City's 2006 L.A. CEQA Thresholds Guide, as appropriate, to assist in answering the Appendix G Threshold questions. Refer to Section IV.K.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR for a discussion of water infrastructure; Section IV.K.2, Utilities and Service Systems—Wastewater, of this Draft EIR for a discussion of wastewater infrastructure; the Project's Initial Study included as Appendix A of this Draft EIR for a discussion of stormwater infrastructure; and Section VI, Other CEQA Considerations, for a discussion of telecommunications facility infrastructure.

The *L.A. CEQA Thresholds Guide* identifies the following criteria to evaluate impacts to energy infrastructure:

- The extent to which the project would require new (off-site) energy supply facilities[12] and distribution infrastructure; or capacity-enhancing alterations to existing facilities;

b. Methodology

This analysis evaluates the potential impacts of the Project on existing energy infrastructure by comparing the estimated Project energy demand with the available capacity. Will-serve letters from LADWP and SoCalGas included in Appendix J of this Draft EIR demonstrate the availability of sufficient energy resources to supply the Project's demand.

Project energy usage, including electricity and natural gas, was calculated using CalEEMod Version 2016.3.2. During Project construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control (including supply and conveyance) and, on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. Construction activities typically do not involve the consumption of natural gas. During Project operation, energy consumption would include electricity and natural gas from uses such as heating/ventilation/air conditioning (HVAC); water heating, cooking, lighting, and use of

[12] *Refer to Section IV.C, Energy, of this Draft EIR for a discussion of energy supply.*

electronics/appliances. Additional details regarding Project energy usage are provided in Section IV.C, Energy, and Appendix D of this Draft EIR.

The Project's estimated energy demands were also analyzed relative to LADWP's and SoCalGas' existing and planned energy supplies in 2023 (i.e., the Project buildout year) to determine if these two energy utility companies would be able to meet the Project's energy demands. Finally, the capacity of local infrastructure to accommodate the Project's estimated electricity and natural gas demand was assessed based on the Utility Report, included as Appendix J of this Draft EIR.

c. Project Design Features

No specific project design features are proposed with regard to energy infrastructure. However, the Project would include project design features designed to improve energy efficiency as set forth in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR.

d. Analysis of Project Impacts

Threshold (a): Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?[13]

(1) Impact Analysis

(a) Construction

(i) Electricity

Construction activities at the Project Site would require minor quantities of electricity for lighting, power tools and other support equipment. Heavy construction equipment would be powered with diesel fuel. As discussed on page IV.C-23 of Section IV.C, Energy, of this Draft EIR, during Project construction activities, electricity usage represents approximately two percent of the estimated net annual Project operational demand, which

[13] *Refer to Section IV.K.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR for a discussion of water infrastructure; Section IV.K.2, Utilities and Service Systems—Wastewater, of this Draft EIR for a discussion of wastewater infrastructure; the Project's Initial Study included as Appendix A of this Draft EIR for a discussion of stormwater infrastructure; and Section VI, Other CEQA Considerations, for a discussion of telecommunications facility impacts.*

as described below, would be within LADWP's infrastructure service capabilities. LADWP's existing electrical infrastructure currently has enough capacity to provide service for construction activities. Moreover, electricity usage during construction would be offset by the elimination of the existing electricity usage at the Project Site ,since the existing on-site uses which currently generate a demand for electricity would be removed. As existing power lines are located in the vicinity of the Project site, electricity during Project construction would be obtained from existing electrical lines pursuant to Project Design Feature AQ-PDF-1, which would require the use of electricity from power poles rather than temporary gasoline or diesel powered generators where available. Therefore, existing off-site infrastructure would not have to be expanded or newly developed to provide electricity to the Project Site during construction or demolition.

With regard to existing electrical distribution lines, the Applicant would be required to coordinate electrical infrastructure removals or relocations with LADWP and comply with site-specific requirements set forth by LADWP, which would ensure that service disruptions and potential impacts associated with grading, construction, and development within LADWP easements are minimized. Project contractors would notify and coordinate with LADWP to identify the locations and depth of all existing electrical lines and avoid disruption of electrical service to other properties. As such, construction of the Project is not anticipated to adversely affect the electrical infrastructure serving the surrounding uses or utility system capacity.

Therefore, based on the above, construction of the Project would not result in an increase in demand for electricity that exceeds available supply or distribution infrastructure capabilities that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

(ii) Natural Gas

Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would not be supplied to support Project construction activities, and there would be no demand generated by construction. However, the Project would involve installation of new natural gas connections to serve the Project Site. Since the Project Site is located in an area already served by existing natural gas infrastructure, it is anticipated that the Project would not require extensive off-site infrastructure improvements to serve the Project Site. Construction impacts associated with the installation of natural gas connections are expected to be confined to trenching in order to place the lines below surface. In addition, prior to ground disturbance, Project contractors would notify and coordinate with SoCalGas to identify the locations and depth of all existing gas lines and avoid disruption of gas service to other properties. **Therefore, construction of the Project would not result in**

an increase in demand for natural gas that exceeds available supply or distribution infrastructure capabilities and would not result in the relocation or construction of new or expanded energy facilities, the construction or relocation of which could cause significant environmental effects.

(b) Operation

(i) Electricity

As shown in Table IV.C-2 in Section IV.C, Energy, of this Draft EIR, the Project's net operational electricity usage would be 899,296 kWh per year, which is less than 0.004 percent of LADWP's projected sales in 2023.[14] In addition, as discussed in Section IV.C. Energy, of this Draft EIR, during peak conditions, the Project would represent approximately 0.005 percent of the LADWP estimated peak load. LADWP has confirmed that the Project's electricity demand can be served by the facilities in the Project area.[15] Therefore, during Project operations, it is anticipated that LADWP's existing and planned electricity capacity and electricity supplies would be sufficient to support the Project's electricity demand. Furthermore, the Project would implement any necessary connections and upgrades required by LADWP to ensure that LADWP would be able to adequately serve the Project. **Therefore, operation of the Project would not result in an increase in demand for electricity that exceeds available supply or distribution infrastructure capabilities and would not result in the relocation or construction of new or expanded energy facilities, the construction or relocation of which could cause significant environmental effects.**

(ii) Natural Gas

As shown in Table IV.C-2 in Section IV.C, Energy, of this Draft EIR, the Project would consume 539,350 cf of natural gas per year, which represents approximately 0.00006 percent of the 2023 forecasted consumption in the SoCalGas planning area. SoCalGas has confirmed that the Project's natural gas demand can be served by the facilities in the Project area.[16] Therefore, during Project operations, it is anticipated that SoCalGas' existing and planned natural gas capacity and electricity supplies would be sufficient to support the Project's natural gas demand. Furthermore, the Project would implement any necessary connections and upgrades required by SoCalGas to ensure that SoCalGas would be able to adequately serve the Project. **Thus, operation of the Project**

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[14] *LADWP, 2017 Power Strategic Long-Term Resources Plan, December 2017, Appendix A, Table A-1.*

[15] *Fuscoe Engineering Inc., Senior Residential Community at The Bellwood Water, Sewer, and Energy Infrastructure Assessment Report, February 2020. Refer to Appendix J of this Draft EIR.*

[16] *Fuscoe Engineering Inc., Senior Residential Community at The Bellwood Water, Sewer, and Energy Infrastructure Assessment Report, February 2020. Refer to Appendix J of this Draft EIR.*

would not result in an increase in demand for natural gas that exceeds available supply or distribution infrastructure capabilities and would not result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

(c) Conclusion

As demonstrated in the analysis above, construction and operation of the Project would not result in an increase in demand for electricity or natural gas that exceeds available supply or distribution infrastructure capabilities that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Therefore, Project impacts related to energy infrastructure would be less than significant during construction and operation.

(2) Mitigation Measures

Project-level impacts related to energy infrastructure would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to energy infrastructure were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

e. Cumulative Impacts

(1) Impact Analysis

(a) Electricity

Buildout of the Project, related projects, and additional forecasted growth in LADWP's service area would cumulatively increase the demand for electricity supplies and infrastructure capacity. LADWP forecasts that its total energy sales in the 2023–2024 fiscal year (the Project's buildout year) will be 23,033 GWh of electricity.[17,18] As such, the Project's net operational electricity usage of 899,296 kWh per year would represent less than 0.004 percent of LADWP's projected sales in 2023 (the Project's full buildout year). In

[17] *LADWP defines its future electricity supplies in terms of sales that will be realized at the meter.*

[18] *LADWP, 2017 Power Strategic Long-Term Resources Plan, December 2017, Appendix A, Table A-1.*

addition, LADWP has confirmed that the Project's electricity demand can be served by the facilities in the Project area.[19] Data used to develop the LADWP demand forecasts take into account population growth, energy efficiency improvements, and economic growth which includes construction projects.[20]

Electricity infrastructure is typically expanded in response to increasing demand, and system expansion and improvements by LADWP are ongoing. LADWP would continue to expand delivery capacity as needed to meet demand increases within its service area at the lowest cost and risk, consistent with LADWP's environmental priorities and reliability standards. The 2017 Power Strategic Long-Term Resources Plan takes into account future energy demand, advances in renewable energy resources and technology, energy efficiency, conservation, and forecast changes in regulatory requirements. Development projects within the LADWP service area would also be anticipated to incorporate site-specific infrastructure improvements, as necessary. Although detailed information regarding electrical infrastructure for development projects in LADWP's service area is not known, it is expected that LADWP would provide for necessary improvements specific to each development project. Each of the development projects would be reviewed by LADWP to identify necessary power facilities and service connections to meet the needs of their respective projects. Project applicants would be required to provide for the needs of their individual projects, thereby contributing to the electrical infrastructure in the service area. As discussed above, will-serve letters are provided for individual projects in which LADWP determines whether sufficient infrastructure is in place to provide electricity to a proposed project. As part of the will-serve letter process, LADWP takes into account all uses (including future development projects) in the service area to ensure that sufficient local and regional infrastructure is adequate. As the will-serve letter for the Project identified adequate infrastructure, construction and operation of the Project would not adversely affect the LADWP electrical grid. **Therefore, the Project and the related projects would not result in significant cumulative impacts related to electricity infrastructure. As such, the Project's contribution would not be cumulatively considerable, and impacts would be less than significant.**

(b) Natural Gas

Buildout of the Project, related projects, and additional forecasted growth in SoCalGas' service area would cumulatively increase the demand for natural gas supplies and infrastructure capacity. Based on the 2020 California Gas Report, the California Energy and Electric Utilities estimated natural gas consumption within SoCalGas' planning

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[19] *Fuscoe Engineering, Inc., Senior Residential Community at The Bellwood—Water, Sewer, and Energy Infrastructure Assessment Report, February 2020. See Appendix J of this Draft EIR.*

[20] *LADWP, 2017 Retail Electric Sales and Demand Forecast, p. 6.*

area will be approximately 2.40 billion cf/day in 2023 (the Project's buildout year).[21] As such, the Project would account for approximately 0.00006 percent of the 2023 forecasted consumption in SoCalGas' planning area. SoCalGas has confirmed that the Project can be served by the facilities in the Project area,[22] and in general, each development project would be expected to comprise a similarly limited percentage of overall natural gas consumption. Moreover, SoCalGas identifies future planned infrastructure and forecasts demand through a variety of factors including the number of housing starts and gas meters installed, employment forecasts and increasing energy efficiency requirements.[23] Therefore, natural gas usage resulting from future development projects is likely accounted for in the SoCalGas projections.

Natural gas infrastructure is typically expanded in response to increasing demand and system expansion and improvements by SoCalGas occur as needed. It is expected that SoCalGas would continue to expand delivery capacity if necessary to meet demand increases within its service area. Although detailed information regarding natural gas infrastructure for each of the development projects is not known, it is expected that SoCalGas would provide for necessary improvements specific to each development project. Development projects within its service area would also be anticipated to incorporate site-specific infrastructure improvements, as appropriate. Project applicants would be required to provide for the needs of their individual projects, thereby contributing to the natural gas infrastructure in the service area.

As discussed above, will-serve letters are provided for individual projects (see Attachment F of Appendix J of this Draft EIR), in which SoCalGas determines whether sufficient infrastructure is in place to provide natural gas service to a proposed project. As part of the will-serve letter process, SoCalGas identifies existing and future planned infrastructure in the service area to ensure that the Project would receive adequate natural gas service. As the will-serve letter for the Project identified adequate infrastructure, construction and operation of the Project would not significantly affect the SoCalGas regional infrastructure. **Therefore, the Project and related projects would not result in significant cumulative impacts related to natural gas infrastructure. As such, the Project's contribution would not be cumulatively considerable, and impacts would be less than significant.**

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[21] *California Gas and Electric Utilities, 2020 California Gas Report, pp. 144–145.*

[22] *Fuscoe Engineering, Inc., Senior Residential Community at The Bellwood—Water, Sewer, and Energy Infrastructure Assessment Report, February 2020. See Appendix J of this Draft EIR.*

[23] *California Gas and Electric Utilities, 2020 California Gas Report, pp. 94–100.*

(2) Mitigation Measures

Cumulative impacts related to energy infrastructure would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance after Mitigation

Cumulative impacts related to energy infrastructure were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

V. Alternatives

V. Alternatives

1. Introduction

The identification and analysis of alternatives to a project is a fundamental aspect of the environmental review process under CEQA. Public Resources Code (PRC) Section 21002 states, in part, that the environmental review process is intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives which will avoid or substantially lessen such significant effects. If specific economic, social, or other conditions make infeasible such alternatives, individual projects may be approved in spite of one or more significant effects. In addition, PRC Section 21002.1(a) states, in part, that the purpose of an environmental impact report is to identify the significant effects on the environment of a project, identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided.

Direction regarding the consideration and discussion of project alternatives in an EIR is provided in CEQA Guidelines Section 15126.6(a), as follows:

> *An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decisionmaking and public participation. An EIR is not required to consider alternatives which are infeasible.*

The CEQA Guidelines indicate that the selection of project alternatives should be based primarily on the ability to avoid or substantially lessen significant impacts relative to the proposed project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. The CEQA Guidelines further direct that the range of alternatives be guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are addressed. In selecting project alternatives for analysis, potential alternatives must be feasible. CEQA Guidelines Section 15126.6(f)(1) states that:

> *Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries […], and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site….*

Beyond these factors, CEQA Guidelines Section 15126.6(e) requires the analysis of a "no project" alternative and CEQA Guidelines Section 15126.6(f)(2) requires an evaluation of alternative location(s) for the project, if feasible. Based on the alternatives analysis, an environmentally superior alternative is to be designated. If the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives.

2. Overview of Selected Alternatives

As indicated above, the intent of the alternatives analysis is to avoid or substantially lessen any of the significant impacts of a project. Based on the analysis provided in Section IV, Environmental Impact Analysis, of this Draft EIR, implementation of the Project would result in significant and unavoidable Project-level impacts with respect to on-site noise during construction and on-site and off-site vibration during construction (pursuant to the threshold for human annoyance). Cumulative impacts associated with on- and off-site noise during construction and off-site vibration during construction (pursuant to the significance threshold for human annoyance) would also be significant and unavoidable. Accordingly, the following alternatives to the Project have been selected for evaluation based on the likelihood of the alternatives being able to substantially lessen one or more of the potentially significant impacts, the intent to provide a senior residential housing community that meets the needs of an increasingly aging population in the City by providing variety in housing together with integrated services, and CEQA's requirement to consider a reasonable range of alternatives:

- Alternative 1: No Project/No Build Alternative—Alternative 1 assumes that the Project would not be implemented, no new permanent development would occur within the Project Site, and the existing environment would be maintained. Thus, the physical conditions of the Project Site would remain as they are today.

- Alternative 2: Commercial/Residential Alternative—Alternative 2 would be developed in accordance with the parameters set forth by the existing zoning designations for the Project Site and would include both residential and commercial uses.

- Alternative 3: Senior Residential Alternative—Alternative 3 would include the development of 130 senior residential units in accordance with the parameters set forth by the existing zoning designations for the Project Site.

Each of these alternatives is described in the sections that follow. In addition, CEQA Guidelines Section 15126.6(c) requires that an EIR identify any alternatives that were considered for analysis but rejected as infeasible, and such potential alternatives are also discussed below.

3. Alternatives Considered and Rejected as Infeasible

As set forth in CEQA Guidelines Section 15126.6(c), an EIR should identify any alternatives that were considered for analysis but rejected as infeasible and briefly explain the reasons for their rejection. According to the CEQA Guidelines, among the factors that may be used to eliminate an alternative from detailed consideration are the alternative's failure to meet most of the basic project objectives, the alternative's infeasibility, or the alternative's inability to avoid significant environmental impacts. Alternatives to the Project that have been considered and rejected as infeasible include the following:

Alternative Project Site: The results of a search to find an alternative site on which the Project could be built determined that suitable similar locations are not available to meet the underlying purpose of the Project to provide a senior residential housing community that meets the needs of an increasingly aging population in the City by providing variety in housing together with integrated services, and Project objectives including locating senior citizen housing within reasonable walking distance of health and community facilities, services, and public transportation by integrating supporting services with the senior housing units in one building. Further, it is not expected that the Applicant can reasonably acquire, control, or have access to an alternative site of similar size. Therefore, an alternative site is not considered feasible as it is not expected that the Applicant can reasonably acquire, control, or have access to a suitable alternative site that would provide for the uses and square footage proposed by the Project. In addition, if a suitable alternative site could be found, it is anticipated that the significant and unavoidable impacts with respect to on-site and off-site noise and vibration sources during construction would still occur assuming the alternative site is located in an urban location. Thus, in accordance with Section 15126.6(f) of the State CEQA Guidelines, this alternative was rejected from further consideration.

Alternatives to Substantially Reduce or Eliminate Significant Noise and Vibration Impacts During Construction: As discussed in Section IV.F, Noise, of this Draft EIR, the Project would result in short-term significant unavoidable construction-related noise and vibration (human annoyance) impacts. Specifically, Project construction activities would result in significant unavoidable construction-related noise impacts related to on-site construction activities, and significant unavoidable vibration (human annoyance)

impacts related to both on-site construction activities and off-site construction traffic. The following approaches were considered to substantially reduce or avoid these impacts:

- Approach (a)—Extended Construction Duration: This approach would extend the construction period, thus reducing the amount of daily construction activity that would occur under the Project. This approach was rejected for the following reasons:

  – Construction noise levels are dependent on the number of construction equipment (on-site equipment or off-site construction trucks). With respect to on-site construction, a reduction in the number of pieces of on-site construction equipment would reduce the construction noise, depending on the number and type of equipment. Specifically, reducing the on-site construction equipment during the site demolition phase from 10 pieces to five pieces of equipment (50 percent reduction) would reduce the construction noise at the off-site receptors by 0.4 dBA L_{eq} at receptor locations R1, R2 and R6, 2.0 dBA L_{eq} at receptor location R5, and 2.7 dBA L_{eq} at receptor locations R3 and R4 (as compared to the Project). The estimated construction noise levels with a 50 percent reduction in the number of pieces of construction equipment would still exceed the significance threshold by up to 35.8 dBA L_{eq} at receptor location R1, 33.9 dBA L_{eq} at receptor location R2, and 41.3 dBA L_{eq} at receptor location R6 during the site demolition phase. Therefore, the construction noise levels under this approach (both on- and off-site construction noise) would be somewhat less than the Project (depending on the amount of reduction) but would still exceed the significance threshold. In addition, the reduction would be less than 3.0 dBA, which is the level where noise is perceptible. This approach would also be inefficient and would increase the number of days that sensitive receptors would be impacted by construction activities. Furthermore, due to the close proximity of the off-site noise sensitive receptors (e.g., receptor locations R1, R2 and R6 that are directly adjacent to the Project Site), it would not be practical to reduce the construction noise levels to below the significance threshold as a single piece of equipment would result in noise levels above the significance threshold. As such, the on-site noise impacts under this approach would not be substantially less than the Project and would remain significant from the on-site construction activities.

  – The on-site construction vibration impacts (human annoyance) would be significant, similar to the Project, as the vibration impact analysis is based on the peak vibration level generated by an individual piece of construction equipment, and the approach would utilize similar construction equipment (e.g., a drill rig and large bulldozer). In addition, off-site construction vibration impacts (human annoyance), due to heavy trucks traveling by sensitive receptors, would also continue to be significant, similar to the Project due to heavy trucks traveling by sensitive receptors.

- Approach (b)—Central Location of Development: An approach where proposed development is moved closer to the center of the Project Site, thus pulling back the proposed development and associated construction activities from the off-site sensitive receptors was reviewed and rejected for the following reasons:

  – Construction noise levels can be reduced by providing an additional buffer zone between the receptor and the construction equipment. Noise levels from construction equipment would attenuate approximately 6 dBA per doubling of distance. The construction noise levels associated with the building phases for the proposed buildings placed closer to the center of the site would be lower than the Project. However, the noise level reduction, depending upon the setback from the property line, would be limited due the size of the Project Site (width of the development area varies from 100 feet to 230 feet). Specifically, moving the building footprint an additional 20 feet toward the center of the site would reduce the noise construction levels at off-site receptors locations R1, R2 and R6 by approximately 5 dBA L_{eq}, which would still exceed the significance thresholds even with mitigation measures. The estimated noise reduction at off-site receptor locations R3, R4 and R5 would be 1 dBA or lower. In addition, noise levels during site demolition, site preparation and grading would be similar to the Project, as construction activities for these phases would be up to the property line, similar to the Project. As such, the on-site construction noise impacts under this approach would remain significant as with the Project.

  – Similar to the Project, the on-site construction vibration impacts (human annoyance) of this option would be significant as heavy construction equipment (e.g., a drill rig and large bulldozer used for the site grading) would still operate near the property line and adjacent sensitive uses under this option. Also similar to the Project, the off-site construction vibration impacts (human annoyance) of this option due to heavy trucks traveling by sensitive receptors would be significant.

- Approach (c)—Reduced Development: This approach would reduce the amount of development that would occur under the Project to the extent that the significant construction-related noise and vibration impacts of the Project would be avoided or substantially reduced. However, similar to the Approach (a), reducing the number of construction equipment (even by up to 50 percent) would not reduce construction noise to a less than significant level. Furthermore, due to the close proximity of the sensitive receptors and a constrained Project Site that does not have the space to create a meaningful buffer zone, it would not be practical to mitigate the on-site construction noise impacts of the Project, especially at receptor locations R1, R2 and R6 (adjacent to the Project Site). In addition, the on-site construction vibration impacts (human annoyance) of this option would remain significant since the vibration impact analysis is based on the peak vibration level generated by individual construction equipment pieces that would still be required near the perimeter of the Project Site. Off-site

construction vibration impacts (human annoyance), due to heavy trucks traveling by sensitive receptors, would also be significant, similar to the Project.

As discussed, none of the above approaches would substantially reduce or avoid the significant unavoidable construction-related on-site noise and both on-site and off-site vibration (human annoyance) impacts of the Project. This is because the significant unavoidable construction-related noise and vibration impacts of the Project, which is infill development in an urban area, are heavily influenced by the close proximity of the Project Site and the proposed haul route to existing noise- and vibration-sensitive uses rather than the amount or duration of Project construction activities. Furthermore, Approach (a) would cost substantially more to construct than the proposed Project given the extended construction period; Approach (b) would not be feasible due the site area constrained for the development; and Approach (c) would not be practical to reduce the amount of construction equipment or create a buffer zone. Therefore, an alternative that includes one or more of these approaches would not substantially reduce or eliminate the significant noise and vibration impacts of the Project and thus no further consideration of these approaches in the EIR is required.

4. Alternatives Analysis Format

In accordance with CEQA Guidelines Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the Project. Furthermore, each alternative is evaluated to determine whether the project objectives, identified in Section II, Project Description, of this Draft EIR, would be substantially attained by the alternative.[1] The evaluation of each of the alternatives follows the process described below:

a. The net environmental impacts of the alternative are determined for each environmental issue area analyzed in Section IV, Environmental Impact Analysis, of this Draft EIR, assuming that the alternative (with the exception of Alternative 1) would implement the same project design features and mitigation measures identified in Section IV, Environmental Impact Analysis, of this Draft EIR.

b. Post-mitigation significant and non-significant environmental impacts of the alternative and the Project are compared for each environmental issue area as follows:

[1] *State of California, CEQA Guidelines Section 15126.6 (c).*

- Less: Where the net impact of the alternative would be clearly less adverse or more beneficial than the impact of the Project, the comparative impact is said to be "less."
- Greater: Where the net impact of the alternative would clearly be more adverse or less beneficial than the Project, the comparative impact is said to be "greater."
- Similar: Where the impact of the alternative and Project would be roughly equivalent, the comparative impact is said to be "similar."

c. The comparative analysis of the impacts is followed by a general discussion of whether the underlying purpose and basic project objectives are feasibly and substantially attained by the alternative.

A summary matrix that compares the impacts associated with the Project with the impacts of each of the analyzed alternatives is provided below in Table V-1 on page V-8. As evaluated in the Initial Study prepared for the Project included in Appendix A of this Draft EIR, and Section VI, Other CEQA Considerations, of this Draft EIR, the Project would not result in significant impacts related to aesthetics (scenic vistas, scenic resources within a scenic highway, and light and glare), air quality (odors), agriculture and forestry resources, biological resources, cultural resources, hazards and hazardous materials, hydrology/water quality, geology and soils, land use (division of an established community), noise (airport related noise), mineral resources, population and housing (unplanned population growth), public services (schools, libraries, parks and recreation), solid waste and wildfires. Therefore, no further analysis of these topics in this EIR is required or provided.

Table V-1
Summary of Comparison of Impacts Associated with the Alternatives and Impacts of the Project

Impact Area	Project	Alternative 1: No Project/No Build Alternative	Alternative 2: Commercial/Residential Alternative	Alternative 3: Senior Residential Alternative
A. AESTHETICS				
Conflict with Applicable Regulations Governing Scenic Quality	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)
B. AIR QUALITY				
Regional Emissions				
Construction	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)
Operation	Less Than Significant	Less (No Impact)	Greater (Less Than Significant)	Less (Less Than Significant)
Localized Emissions				
Construction	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)
Operation	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Less (Less Than Significant)
Toxic Air Contaminants				
Construction	Less Than Significant	Less (No Impact)	Less (Less Than Significant)	Less (Less Than Significant)
Operation	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)
C. ENERGY				
Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources				
Construction	Less Than Significant	Less (No Impact)	Less (Less Than Significant)	Less (Less Than Significant)

Table V-1 (Continued)
Summary of Comparison of Impacts Associated with the Alternatives and Impacts of the Project

Impact Area	Project	Alternative 1: No Project/No Build Alternative	Alternative 2: Commercial/Residential Alternative	Alternative 3: Senior Residential Alternative
Operation	Less Than Significant	Greater (Less than Significant)	Similar (Less Than Significant)	Less (Less Than Significant)
Conflict with Plans for Renewable Energy or Energy Efficiency	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)
D. GREENHOUSE GAS EMISSIONS				
Greenhouse Gas Emissions	Less Than Significant	Less (No Impact)	Greater (Less Than Significant)	Less (Less Than Significant)
E. LAND USE AND PLANNING				
Conflict with Land Use Plans	Less Than Significant	Less (No Impact)	Less (Less Than Significant)	Greater (Less Than Significant)
F. NOISE				
Construction[a]				
On-site Noise	Significant and Unavoidable	Less (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Off-site Noise	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)
On-site Vibration (Building Damage)	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)
On-site Vibration (Human Annoyance)	Significant and Unavoidable	Less (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Off-site Vibration (Building Damage)	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)

Table V-1 (Continued)
Summary of Comparison of Impacts Associated with the Alternatives and Impacts of the Project

Impact Area	Project	Alternative 1: No Project/No Build Alternative	Alternative 2: Commercial/Residential Alternative	Alternative 3: Senior Residential Alternative
Off-site Vibration (Human Annoyance)	Significant and Unavoidable	Less (No Impact)	Similar (Significant and Unavoidable)	Similar (Significant and Unavoidable)
Operation				
On-site Noise	Less Than Significant	Less (No Impact)	Less (Less Than Significant)	Similar (Less Than Significant)
Off-site Noise	Less Than Significant	Less (No Impact)	Greater (Less Than Significant)	Less (Less Than Significant)
G. POPULATION AND HOUSING				
Displace Substantial Numbers of Existing People or Housing	Less Than Significant	Less (No Impact)	Greater (Less Than Significant)	Similar (Less Than Significant)
H. PUBLIC SERVICES				
Fire Protection				
Construction	Less Than Significant	Less (No Impact)	Less (Less Than Significant)	Less (Less Than Significant)
Operation	Less Than Significant	Less (No Impact)	Less (Less Than Significant)	Less (Less Than Significant)
Police Protection				
Construction	Less Than Significant	Less (No Impact)	Less (Less Than Significant)	Less (Less Than Significant)
Operation	Less Than Significant	Less (No Impact)	Less (Less Than Significant)	Less (Less Than Significant)
I. TRANSPORTATION				
Conflict with Plans	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)

Table V-1 (Continued)
Summary of Comparison of Impacts Associated with the Alternatives and Impacts of the Project

Impact Area	Project	Alternative 1: No Project/No Build Alternative	Alternative 2: Commercial/Residential Alternative	Alternative 3: Senior Residential Alternative
Vehicle Miles Travelled	No Impact	Less (No Impact)	Greater (Less Than Significant)	Similar (No Impact)
Emergency Access	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)
J. TRIBAL CULTURAL RESOURCES				
Tribal Cultural Resources	Less Than Significant	Less (No Impact)	Less (Less Than Significant)	Less (Less Than Significant)
K. UTILITIES AND SERVICE SYSTEMS				
Water Supply and Infrastructure				
Construction	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)
Operation	Less Than Significant	Less (No Impact)	Less (Less Than Significant)	Less (Less Than Significant)
Wastewater				
Construction	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)
Operation	Less Than Significant	Less (No Impact)	Less (Less Than Significant)	Less (Less Than Significant)
Energy Infrastructure				
Construction	Less Than Significant	Less (No Impact)	Less (Less Than Significant)	Less (Less Than Significant)
Operation	Less Than Significant	Less (No Impact)	Less (Less Than Significant)	Less (Less Than Significant)

Table V-1 (Continued)
Summary of Comparison of Impacts Associated with the Alternatives and Impacts of the Project

Impact Area	Project	Alternative 1: No Project/No Build Alternative	Alternative 2: Commercial/Residential Alternative	Alternative 3: Senior Residential Alternative

[a] *Cumulative on- and off-site noise impacts and cumulative off-site vibration impacts with respect to human annoyance during Project construction would be significant and unavoidable.*

Source: Eyestone Environmental, 2021.

5. Project Objectives

CEQA Guidelines Section 15124(b) states that the project description shall contain "a statement of the objectives sought by the proposed project." Section 15124(b) of the CEQA Guidelines further states that "the statement of objectives should include the underlying purpose of the project." As discussed in Section II of this Draft EIR, the underlying purpose of the Project is to provide a senior residential housing community that meets the needs of an increasingly aging population in the City by providing variety in housing together with integrated services. The Project's basic and fundamental objectives are provided below.

- Promote adequate housing that is accessible to senior citizens by providing a new senior-only housing residential community that meets the daily living needs of the City's aging adult population, including recreational and social needs on-site, advancing the West Los Angeles Community Plan Objective 1-4 and supporting General Plan (Housing Element) Objective 1.1 to provide housing to meet current and projected needs.

- Develop senior-independent units, assisted living guest rooms, and memory care guest rooms to help meet the specific housing needs of the City's aging population, consistent with General Plan (Housing Element) Objective 1.1, and Policy 1.1.3, and West Los Angeles Community Plan Objective 1-1 to construct a range of different housing types that address the diverse needs of the City's existing residents and projected population.

- Locate senior citizen housing within reasonable walking distance of health and community facilities, services and public transportation by integrating supporting services with the senior housing units in one building, supporting the West Los Angeles Community Plan Policy 1-2.2.

- Provide a range of on-site recreational, health, wellness and dining activities and services to support the daily needs of seniors and promote safety and health consistent with General Plan (Housing Element) Objective 2.1.

- Unify the Project Site to maximize efficient use of the site and associated parcels and orient development to and respond to the low- to mid-scale character of surrounding land uses while maintaining adequate public circulation.

V. Alternatives

A. Alternative 1: No Project/No Build Alternative

1. Description of the Alternative

In accordance with the CEQA Guidelines, the No Project Alternative for a development project on an identifiable property consists of the circumstance under which the project does not proceed. Section 15126.6(e)(3)(B) of the CEQA Guidelines states in part that, "in certain instances, the No Project Alternative means 'no build' wherein the existing environmental setting is maintained." Accordingly, for purposes of this analysis, Alternative 1, the No Project/No Build Alternative, assumes that the Project would not be approved and no new development would occur within the Project Site. Thus, the physical conditions of the Project Site would generally remain as they are today. The Project Site is currently developed with several multi-family residential buildings and associated structures and parking, and includes the portion of Bellwood Avenue that bisects the Project Site. Under Alternative 1, no new construction would occur.

2. Environmental Impacts

a. Aesthetics

No construction activities would occur under Alternative 1 and the existing buildings would remain. Therefore, Alternative 1 would have no potential to conflict with applicable zoning and other regulations governing scenic quality. No impacts would occur compared to the less-than-significant impacts of the Project.

b. Air Quality

(1) Regional Emissions

(a) Construction

Alternative 1 would not remove the existing multi-family residential developments or require any construction activities on the Project Site. Therefore, Alternative 1 would not result in any construction emissions associated with construction worker and construction truck traffic, fugitive dust from demolition and excavation, or the use of heavy-duty construction equipment. Therefore, no construction-related regional air quality impacts

would occur. Thus, impacts related to regional air quality emissions during construction would be less under Alternative 1 when compared to the less-than-significant impacts of the Project.

(b) Operation

Alternative 1 would not result in new development or increased operations that could generate additional operational emissions related to vehicular traffic or the consumption of electricity and natural gas beyond what is currently generated by the existing uses. Therefore, no operational air quality impacts associated with regional emissions would occur under Alternative 1. Thus, impacts related to regional air quality emissions during operation would be less under Alternative 1 when compared to the less-than-significant impacts of the Project.

(2) Localized Emissions

(a) Construction

As previously discussed, Alternative 1 would not result in any construction emissions associated with construction worker and construction truck traffic, fugitive dust from demolition and excavation, or the use of heavy-duty construction equipment. Therefore, construction-related localized air quality impacts would not occur. Thus, impacts related to localized air quality emissions during construction would be less under Alternative 1 when compared to the less-than-significant impacts of the Project.

(b) Operation

Alternative 1 would not result in new development or increased operations that could generate additional operational emissions related to vehicular traffic or the consumption of electricity and natural gas beyond what is currently generated by the existing uses. Therefore, no operational air quality impacts associated with localized emissions would occur under Alternative 1, and such impacts would be less than the less-than-significant impacts of the Project.

(3) Toxic Air Contaminants

(a) Construction

Since construction activities would not occur on the Project Site, Alternative 1 would not result in diesel particulate emissions during construction that could generate substantial toxic air contaminants (TACs). Therefore, no impacts associated with the release of TACs would occur under Alternative 1. As such, TAC impacts under Alternative 1 would be less than the less-than-significant impacts of the Project.

(b) Operation

Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes (e.g., chrome plating, electrical manufacturing, petroleum refinery). Since Alternative 1 would not result in any new development on the Project Site, no increase in any potential sources of TAC emissions would occur. Therefore, no operational impacts associated with TACs would occur under Alternative 1, and such impacts would be less than the less-than-significant impacts of the Project.

c. Energy

(1) Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources

(a) Construction

Construction activities would not occur under the No Project/No Build Alternative. Therefore, Alternative 1 would not generate a short-term demand for energy during construction that could result in the wasteful, inefficient, or unnecessary consumption of energy resources. Thus, no construction-related impacts to energy would occur. As such, construction-related impacts under the No Project/No Build Alternative would be less when compared to the less-than-significant impacts of the Project.

(b) Operation

The No Project/No Build Alternative would not alter the existing land uses or site operations on the Project Site. Therefore, Alternative 1 would not increase the long-term energy demand on the Project Site and would have no potential to result in the wasteful, inefficient, or unnecessary consumption of energy resources associated with new development. It is noted however that the Project would replace existing older buildings with modern buildings incorporating the latest City Green Building Code requirements, thereby improving the energy efficiency of buildings. As such, impacts under Alternative 1 would be less than significant, but greater when compared to the less-than-significant impacts of the Project.

(2) Conflict with Plans for Renewable Energy or Energy Efficiency

The No Project/No Build Alternative would not involve any new development. As such, Alternative 1 would not have the potential to conflict with plans for renewable energy or energy efficiency. No impacts related to renewable energy or energy efficiency plans would occur under the No Project/No Build Alternative, and impacts would be less when compared to the less-than-significant impacts of the Project.

d. Greenhouse Gas Emissions

The No Project/No Build Alternative would not develop new uses on the Project Site. Therefore, no new greenhouse gas (GHG) emissions beyond what is currently generated by the existing multi-family residential developments on the Project Site would be generated under Alternative 1. As such, no impacts associated with GHG emissions under the No Project/No Build would occur, and impacts would be less when compared to the less-than-significant impacts of the Project.

e. Land Use and Planning

Under the No Project/No Build Alternative, there would be no changes to the physical or operational characteristics within the Project Site. Thus, no impacts associated with conflicts with land use regulations and plans would occur, and impacts would be less than the less-than-significant impacts of the Project.

f. Noise

(1) Noise

(a) Construction

No new construction activities would occur under the No Project/No Build Alternative. Therefore, no construction-related noise would be generated on-site or off-site. As such, no on-site or off-site noise impacts would occur under Alternative 1, and impacts would be less when compared to those of the Project. Specifically, the No Project/No Build Alternative would avoid the Project's significant and unavoidable impacts with respect to on-site noise sources during construction.

(b) Operation

Alternative 1 would not develop new uses on the Project Site, and no changes to existing site operations would occur. Thus, no new stationary or mobile noise sources would be introduced to the Project Site or the vicinity of the Project Site. As such, no impacts associated with operational on-site and off-site noise would occur under Alternative 1, and such impacts would be less than the less-than-significant impacts of the Project.

(2) Vibration

(a) Construction

No new construction activities would occur under the No Project Alternative. Therefore, no construction-related vibration would be generated on-site or off-site under

Alternative 1. As such, no on-site or off-site vibration impacts would occur under Alternative 1, and impacts would be less when compared to those of the Project, which would be less than significant for on-site construction vibration (building damage), significant and unavoidable for on-site construction vibration (human annoyance), less than significant for off-site construction vibration (building damage), and significant and unavoidable for off-site construction vibration (human annoyance).

(b) Operation

Alternative 1 would not develop new uses on the Project Site, and no changes to existing site operations would occur. Thus, no new on-site or off-site vibration sources would be introduced to the Project Site or the vicinity of the Project Site. As such, no impacts associated with operational on-site and off-site vibration would occur under Alternative 1, and such impacts would be less than the less-than-significant impacts of the Project.

g. Population and Housing

No changes to existing land uses or site operations would occur under Alternative 1. Alternative 1 would not result in the removal of the existing multi-family residential buildings or displacement of existing residents. Therefore, no population impacts would occur under Alternative 1 and impacts would be less when compared to the less-than-significant impacts of the Project.

h. Public Services

(1) Fire Protection

(a) Construction

As Alternative 1 would not require construction, it would not result in construction-related demand for Los Angeles Fire Department (LAFD) fire protection facilities or services, construction traffic that could potentially slow emergency response times, or the potential for construction-related obstruction of emergency access. Thus, no construction-related fire protection impacts would occur under Alternative 1, and impacts would be less when compared to the less-than-significant impacts of the Project.

(b) Operation

No changes to existing land uses or operations on-site would occur under Alternative 1. Therefore, there would be no potential to increase the level of activity on the Project Site or increase the service population for the LAFD stations that serve the Project

Site. No impacts to fire protection facilities would occur under Alternative 1, and impacts would be less when compared to the less-than-significant impacts of the Project.

(2) Police Protection

(a) Construction

As Alternative 1 would not require construction, it would not result in construction-related demand for police protection facilities or services from the Los Angeles Police Department (LAPD), construction traffic that could potentially slow emergency response times, or the potential for construction-related obstruction of emergency access. Therefore, Alternative 1 would not result in any police protection impacts due to construction, and impacts would be less when compared to the less-than-significant impacts of the Project.

(b) Operation

No changes to existing land uses or operations on-site would occur under Alternative 1. Therefore, there would be no potential to increase the service population on-site and associated level of activity that could increase calls for police protection services from the LAPD. No impacts to police protection services would occur under Alternative 1, and impacts would be less when compared to the less-than-significant impacts of the Project.

i. Transportation

Since the No Project/No Build Alternative would not develop new or additional land uses on the Project Site, Alternative 1 would not generate any additional vehicle trips or alter existing access or circulation within the Project Site during operation. Therefore, no impacts would occur with respect to operational traffic, including conflicts with programs, plans, ordinances, or policies addressing the circulation system; vehicle miles traveled (VMT); and emergency access. Therefore, impacts under the No Project/No Build Alternative would be less when compared to the Project, which would be less than significant.

j. Tribal Cultural Resources

Grading and other earthwork activities would not occur under the No Project/No Build Alternative. Therefore, there would be no potential for Alternative 1 to uncover subsurface tribal cultural resources. As such, no impacts to tribal cultural resources would occur under Alternative 1, and impacts would be less when compared to those of the Project, which would be less than significant.

k. Utilities and Service Systems

(1) Water Supply and Infrastructure

(a) Construction

Construction activities would not occur under Alternative 1. Therefore, Alternative 1 would not generate a short-term demand for water during construction, and no construction-related impacts to water supply and infrastructure would occur. As such, impacts under Alternative 1 would be less when compared to the less-than-significant impacts of the Project.

(b) Operation

Alternative 1 would not alter the existing land uses or site operations on the Project Site. Therefore, Alternative 1 would not increase the long-term water demand or fire flow water demand within the Project Site. No operational impacts to water supply and water infrastructure would occur under Alternative 1, and impacts would be less when compared to the less-than-significant impacts of the Project.

(2) Wastewater

(a) Construction

Construction activities would not occur under Alternative 1. Therefore, Alternative 1 would not generate wastewater during construction and no construction-related impacts to wastewater conveyance and treatment infrastructure would occur. As such, impacts related to wastewater would be less when compared to the less-than-significant impacts of the Project.

(b) Operation

Alternative 1 would not alter the existing land uses or site operations on the Project Site. Therefore, Alternative 1 would not increase the wastewater flow on the Project Site. No operational impacts related to wastewater conveyance or treatment would occur under Alternative 1, and impacts would be less when compared to the impacts of the Project, which would be less than significant.

(3) Energy Infrastructure

(a) Construction

Construction activities would not occur under the No Project/No Build Alternative. Therefore, Alternative 1 would not generate a short-term demand for energy during

construction, and no construction-related impacts to energy infrastructure would occur. As such, impacts under the No Project/No Build Alternative would be less when compared to the less-than-significant impacts of the Project.

(b) Operation

The No Project/No Build Alternative would not alter the existing land uses or site operations on the Project Site. Therefore, Alternative 1 would not increase the long-term energy demand from the Project Site. No operational impacts related to energy infrastructure would occur under the No Project/No Build Alternative, and impacts would be less when compared to the less-than-significant impacts of the Project.

3. Comparison of Impacts

The No Project/No Build Alternative would avoid the Project's significant and unavoidable on-site construction noise impacts and on- and off-site construction vibration impacts with respect to human annoyance. Furthermore, the No Project/No Build Alternative would avoid the Project's cumulative on- and off-site construction noise impacts, as well as the Project's cumulative off-site construction vibration impacts related to human annoyance. Impacts associated with the remaining environmental issues would be less than or similar to those of the Project with the exception of impacts associated with the efficient use of energy during operation, which would be less than significant, but greater than the Project.

4. Relationship of the Alternative to Project Objectives

Under the No Project/No Build Alternative, the existing multi-family residential buildings and surface parking areas would continue to operate on the Project Site and no new development would occur. As such, Alternative 1 would not meet the underlying purpose of the Project or any of the Project objectives. Specifically, Alternative 1 would not meet the underlying purpose of the Project to provide a senior residential housing community that meets the needs of an increasingly aging population in the City by providing variety in housing together with integrated services. In addition, Alternative 1 would not meet the following Project objectives:

- Promote adequate housing that is accessible to senior citizens by providing a new senior-only housing residential community that meets the daily living needs of the City's aging adult population, including recreational and social needs on-site, advancing the West Los Angeles Community Plan Objective 1-4 and supporting General Plan (Housing Element) Objective 1.1 to provide housing to meet current and projected needs.

- Develop senior-independent units, assisted living guest rooms, and memory care guest rooms to help meet the specific housing needs of the City's aging population, consistent with General Plan (Housing Element) Objective 1.1, and Policy 1.1.3, and West Los Angeles Community Plan Objective 1-1 to construct a range of different housing types that address the diverse needs of the City's existing residents and projected population.

- Locate senior citizen housing within reasonable walking distance of health and community facilities, services and public transportation by integrating supporting services with the senior housing units in one building, supporting the West Los Angeles Community Plan Policy 1-2.2.

- Provide a range of on-site recreational, health, wellness and dining activities and services to support the daily needs of seniors and promote safety and health consistent with General Plan (Housing Element) Objective 2.1.

- Unify the Project Site to maximize efficient use of the site and associated parcels and orient development to and respond to the low- to mid-scale character of surrounding land uses while maintaining adequate public circulation.

B. Alternative 2: Commercial/Residential Alternative

1. Description of the Alternative

In accordance with CEQA Guidelines Section 15126.6(e)(3)(B), "if the project is other than a land use or regulatory plan, for example a development project on an identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project were approved. If disapproval of the project under consideration would result in actions by others, such as the proposal of some other project, this "no project" consequence should be discussed… and the analysis should identify the practical result of the project's non-approval…" CEQA Guidelines Section 15126.6(e)(3)(C) further states that the No Project Alternative should project "what would reasonably be expected to occur in the foreseeable future if the project were not approved based on current plans and consistent with available infrastructure and community services." The Project Site includes existing buildings that were constructed between approximately 1940 to 1951 on a development parcel located within an urbanized area with existing infrastructure and immediate proximity to mass transit. Based on this guidance, under Alternative 2, the Project Site would be developed in accordance with the parameters set forth by the existing zoning designations for the Project Site, which are R3-1-O (Multiple Residential, Height District 1, Oil Drilling) and C2-1VL-O (Commercial, Height District 1VL, Oil Drilling).

Land uses permitted within the R3 designation include a wide variety of residential uses, including group dwellings, multiple dwellings, apartment houses, boarding houses, rooming houses, accessory uses and home occupations, senior independent housing, and assisted living care housing. Land Uses permitted within the C2 designation include a wide variety of uses, including, but not limited to, eldercare facilities, multiple dwellings, various retail and restaurant spaces, auditoriums, automotive fueling and service stations, churches, drive-in businesses, hospitals, sanitariums, clinics, and schools. As discussed in Section II, Project Description, of this Draft EIR, Height District 1 within the R3 Zone limits the height to 45 feet and the FAR to 3:1. Height District 1VL within the C2 Zone limits the height to 45 feet and three stories (except that there is no restriction on the number of stories for buildings used entirely for residential purposes) and the FAR to 1.5:1.

Based on the existing land use and zoning of the Project Site described above, Alternative 2 would develop approximately 111,591 square feet of multi-family residential uses with 60 new residential units, 21,257 square feet of retail uses, and 21,257 square feet of office uses. The new residential units under Alternative 2 would not be designated as senior housing units. Under Alternative 2, the portion of Bellwood Avenue that bisects the Project Site would remain a public street in its current alignment. A conceptual site plan of Alternative 2 is provided in Figure V-1 on page V-25.

As with the Project, the three existing multi-family residential developments with a total of 43,939 square feet, including 112 residential units, would be removed to accommodate Alternative 2. The proposed uses would be built within two two-story structures ranging in height from 25 feet to 35 feet for retail/office uses, and one four-story structure, 45 feet in height, for residential uses. With regard to vehicular parking, Alternative 2 would provide a total of 247 parking spaces. These parking spaces would be provided within one subterranean parking level under the residential apartment building and two subterranean parking levels under the retail/office buildings that would extend to a maximum depth of 22 feet (a reduction of eight feet in the depth of grading and an overall reduction in grading compared to the Project). As with the Project, Alternative 2 would provide a variety of open space consistent with the proposed residential uses. Specifically, in accordance with the LAMC, Alternative 2 would provide for approximately 10,500 square feet of open space. Overall, Alternative 2 would construct approximately 154,105 square feet of new floor area compared to the Project's 241,754 square feet of new floor area and would result in a floor area ratio of 1.5:1 on the C2-zoned parcels and 3:1 on the R3-zoned parcels.

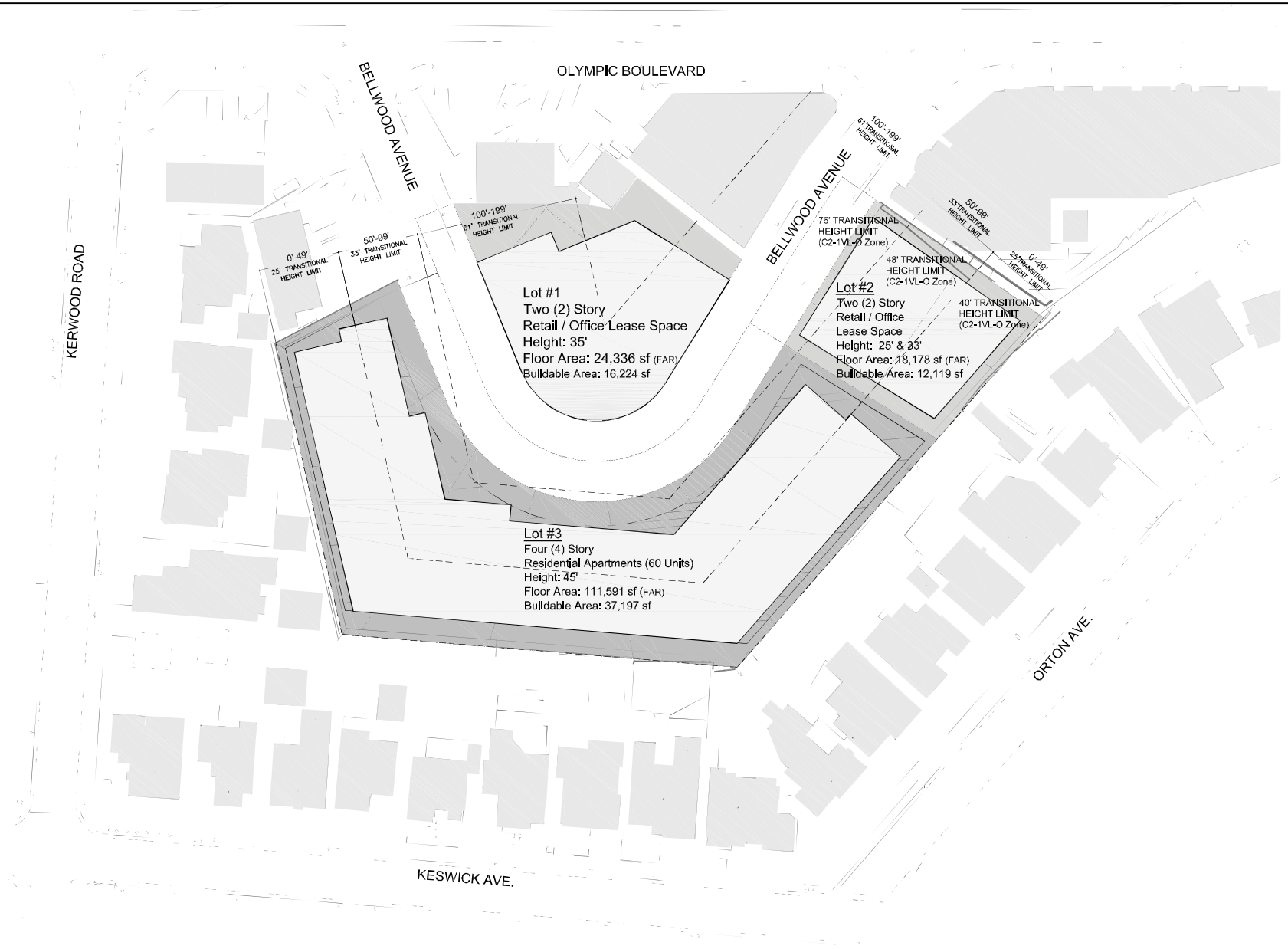

Figure V-1

Alternative 2 Conceptual Site Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2021.

2. Environmental Impacts

a. Aesthetics

As discussed in Section IV.A, Aesthetics, of this Draft EIR, a number of local plans, policies, and regulations related to scenic quality are applicable to the Project, including the City of Los Angeles General Plan Framework Element (Framework Element), Los Angeles General Plan Conservation Element (Conservation Element), the West Los Angeles Community Plan (Community Plan), the Citywide Urban Design Guidelines, and the Los Angeles Municipal Code (LAMC). As described above, the Commercial/Residential Alternative would develop the Project Site in accordance with the parameters set forth by the existing zoning designations for the Project Site. As previously discussed, Alternative 2 would replace the existing uses on-site with 60 new residential units, 21,257 square feet of retail uses, and 21,257 square feet of office uses. The residential, retail, and office uses proposed would complement the uses surrounding the Project Site and would be designed consistent with relevant plans related to scenic quality, including promoting pedestrian activity and further activating the streets in the vicinity of the Project Site. Similar to the Project, Alternative 2 would also include new buildings designed to complement the existing surrounding uses and respond to the low- to mid-scale character of the surrounding area, also consistent with relevant plans related to scenic quality. Overall, similar to the Project, Alternative 2 also would not conflict with the zoning and other regulations governing scenic quality detailed in Section IV.A, Aesthetics, of this Draft EIR. Thus, impacts would be less than significant and similar to those of the Project.

b. Air Quality

(1) Regional Emissions

(a) Construction

As with the Project, construction of Alternative 2 has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Project Site. In addition, fugitive dust emissions would result from demolition and construction activities. As discussed in Section IV.B, Air Quality, of this Draft EIR, construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

Under Alternative 2, construction activity would be reduced in comparison to the Project due to the reduction in overall development. However, the intensity of air emissions and fugitive dust from site preparation and construction activities would be similar on days with maximum construction activities. Because maximum daily conditions are used for

measuring impact significance, regional and localized impacts on these days would be similar to the less than significant impacts of the Project. Therefore, as with the Project, Alternative 2 would result in less than significant impacts, and impacts would be similar to those of the Project.

(b) Operation

As previously discussed, the development proposed under Alternative 2 would be reduced compared to the Project. However, based on the proposed uses, the number of net daily trips generated by Alternative 2 would be greater than the number of new daily trips generated by the Project. Specifically, as provided in Appendix H of this Draft EIR, Alternative 2 would result in a total of 638 net new daily vehicle trips, which would be comparatively greater than the Project's net reduction of 75 daily trips. Thus, operational regional air pollutant emissions associated with Alternative 2 would be generated by vehicle trips and daily VMT to the Project Site, which are the largest contributors to operational air pollutant emissions, and by the consumption of natural gas.[2]

Despite the reduction in uses and overall floor area, the overall pollutant emissions generated by Alternative 2 would be greater than the emissions generated by the Project due to the increase in the number of daily vehicle trips. Overall, impacts associated with regional air pollutant emissions during operation of Alternative 2 would be less than significant and greater than the impacts of the Project.

(2) Localized Emissions

(a) Construction

On-site construction activities under Alternative 2 would be located at similar distances from sensitive receptors as the Project. Although Alternative 2 would result in a reduction in the amount of proposed development compared to the Project, the intensity of construction activities would be similar on days with maximum construction activities. Because maximum daily conditions are used for measuring impact significance, localized impacts on these days would be similar to the less than significant impacts of the Project. Therefore, as with the Project, localized impacts under Alternative 2 would be less than significant, and similar to the less-than-significant impacts of the Project.

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[2] *It should be noted that criteria pollutant emissions are not calculated for electricity usage, consistent with SCAQMD and CalEEMod methodology. Criteria pollutant emissions from power plants are subject to local, state, and federal control measures, which can be considered to be the maximum feasible level of mitigation for power plant emissions.*

(b) Operation

Localized operational impacts are determined primarily by peak-hour intersection traffic volumes and on-site area and stationary sources. As provided in Appendix H of this Draft EIR, Alternative 2 would generate a total of 11 net new vehicle trips during the A.M. peak hour and 33 net new trips during the P.M. peak hour. This alternative would generate more peak-hour trips compared to the Project's net reduction of 16 A.M. peak-hour trips and 9 P.M. peak-hour trips. As such, total peak-hour vehicular emissions would be greater under Alternative 2 compared to the Project. However, the development proposed under Alternative 2 would be reduced compared to the Project; therefore, area and stationary sources would generate less on-site operational air emissions compared to the Project. With the increase in localized vehicle emissions and decrease in on-site emissions, overall localized air quality impacts under Alternative 2 would be similar to the Project. As such, under Alternative 2, total contributions to localized air pollutant emissions during operation would be similar to the Project's contribution. Accordingly, localized air quality impacts under Alternative 2 would be less than significant, and similar to the less-than-significant impacts of the Project.

(3) Toxic Air Contaminants

(a) Construction

As with the Project, construction of Alternative 2 would generate diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. These activities represent the greatest potential for TAC emissions. As discussed in Section IV.B, Air Quality, of this Draft EIR, the Project would result in less-than-significant impacts with regard to TAC emissions. Overall construction TAC emissions generated by Alternative 2 would be less than to those of the Project since excavation activities required during construction of Alternative 2 would be reduced under this alternative. Thus, impacts due to TAC emissions and the corresponding individual cancer risk under Alternative 2 would be less than significant, and less than the impacts of the Project.

(b) Operation

As set forth in Section IV.B, Air Quality, of this Draft EIR, the primary sources of potential TACs associated with Project operations would include diesel particulate matter (DPM) from delivery trucks. Under Alternative 2, the overall increase in the number of deliveries and associated diesel particulate matter emissions would be increased compared to the Project due to the increase in the number of trips generated. However, the number of delivery trucks under Alternative 2 would not result in a notable increase in TAC emissions compared to the Project. Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes (e.g., chrome plating,

electrical manufacturing, and a petroleum refinery). Similar to the Project, the land uses proposed under Alternative 2 are not considered land uses that generate substantial TAC emissions. Therefore, Alternative 2 would not release substantial amounts of TACs. Impacts under Alternative 2 would be less than significant, and similar to the less-than-significant impacts of the Project.

c. Energy

(1) Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources

(a) Construction

Similar to the Project, construction activities associated with Alternative 2 would consume electricity to supply and convey water for dust control and, on a limited basis, may be used to power lighting, electronic equipment, and other construction activities necessitating electrical power. Like the Project, construction activities associated with Alternative 2 would not involve the consumption of natural gas. As with the Project, Alternative 2 would also generate a demand for transportation energy associated with on- and off-road vehicles. However, the energy consumed during construction of Alternative 2 would be reduced compared to the Project due to the reduction in overall construction activities. As with the Project, construction equipment used during construction of Alternative 2 would comply with Title 24 requirements where applicable, CARB's anti-idling regulations, as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Alternative 2 would also implement design features, similar to the Project, to reduce energy usage and fuel consumption during construction. Specifically, like the Project, Alternative 2 would implement AQ-PDF-1 which would require the use of electricity from power poles rather than temporary gasoline or diesel powered generators where available. Therefore, as with the Project, Alternative 2 construction activities would require energy demand that is not wasteful, inefficient, or unnecessary. Overall, impacts regarding energy use associated with short-term construction activities would be less than significant under Alternative 2 and less than the less-than-significant impacts due to the reduction in construction activities and duration.

(b) Operation

As with the Project, operation of Alternative 2 would generate an increased consumption of electricity, natural gas, and petroleum-based fuels relative to existing conditions. As previously discussed, Alternative 2 would develop 60 residential units, 21,257 square feet of retail uses, and 21,257 square feet of office uses. As previously noted, the number of daily trips under Alternative 2 would be greater when compared to the Project. As such, transportation fuel usage under Alternative 2 would be greater in comparison to the Project. However, with the reduced square footage under Alternative 2,

the consumption of electricity and natural gas would be less than the Project. With the increase in transportation fuel usage and decrease in on-site electricity and natural gas consumption, overall energy usage under Alternative 2 would be similar to the Project. As with the Project, Alternative 2 would implement design features to reduce energy usage. Specifically, like the Project, Alternative 2 would implement GHG-PDF-1 as set forth in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, which states that the design of new buildings would incorporate sustainability features (e.g., Energy Star–labeled products); incorporate water conservation features, such as drip/subsurface irrigation; and use LED lighting, which would reduce electricity used for lighting purposes compared to non-LED lighting. In addition, Alternative 2 would also incorporate GHG-PDF-2, which limits the number of natural gas-fueled fireplaces; therefore, reducing GHG emissions resulting from natural gas combustion. Accordingly, as with the Project, the consumption of electricity, natural gas, and petroleum-based fuels under Alternative 2 would not be wasteful, inefficient, or unnecessary. Overall, impacts related to energy use during operation of Alternative 2 would be less than significant and similar to the less-than-significant impacts of the Project.

(2) Conflict with Plans for Renewable Energy or Energy Efficiency

As discussed in Section IV.C, Energy, of this Draft EIR, the energy conservation policies and plans relevant to the Project include the California Title 24 energy standards, the 2019 CALGreen Code, and the City of Los Angeles Green Building Code. As these conservation policies are mandatory under the City of LA Building Code, Alternative 2 would not conflict with applicable plans for renewable energy or energy efficiency.

With regard to transportation related energy usage, Alternative 2 would also comply with goals of the Southern California Association of Governments' (SCAG) 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and 2020–2045 RTP/SCS, which incorporates VMT targets established by SB 375. As with the Project, the uses proposed under Alternative 2 and their proximity to public transportation would serve to reduce VMT and associated transportation fuel usage within the region. In addition, vehicle trips generated during Project operations would comply with Corporate Average Fuel Economy (CAFE) standards. As with the Project, Alternative 2 would be required to comply with California Air Resources Board (CARB) anti-idling regulations and the In-Use Off-Road Diesel Fleet regulations during construction.

Therefore, based on the above, Alternative 2 would not conflict with plans for renewable energy or energy efficiency. Impacts related to renewable energy or energy efficiency plans would be less than significant under Alternative 2, and impacts would be similar to the less-than-significant impacts of the Project.

d. Greenhouse Gas Emissions

Greenhouse Gas Emissions (GHG) emissions from a development project are determined in large part by the number of daily trips generated and associated VMT, as well as energy consumption from proposed land uses. As previously discussed, the number of daily trips and daily VMT under Alternative 2 would increase compared to the Project. However, with the reduction in square footage, Alternative 2 would also result in a reduction in energy and water consumption compared to the Project. Although Alternative 2 would result in a reduction in energy and water related GHG emissions, the increase in daily trips and VMT would result in greater overall GHG emissions in comparison to the Project. As with the Project, Alternative 2 would be designed to comply with the requirements of the CALGreen Code and the Los Angeles Green Building Code. Alternative 2 would also incorporate design features to reduce GHG emissions and would be designed to comply with the City's Green Building Ordinance, as applicable. With compliance with the CALGreen Code and the Los Angeles Green Building Code, and with the implementation of comparable sustainability features as the Project, Alternative 2 would also be consistent with the GHG reduction goals and objectives included in adopted state (Scoping Plan), regional, and local regulatory plans. Alternative 2 would also benefit from proximity to mass transit and proximity to retail and commercial uses resulting in a similar reduction in VMT in comparison to a project without trip reducing features. With the reduction in VMT and compliance with green building measures, Alternative 2 would also be consistent with the VMT reduction goals of the RTP/SCS. Thus, impacts related to GHG emissions under Alternative 2 would be less than significant. However, such impacts would be greater than the less-than-significant impacts of the Project.

e. Land Use

As previously described, Alternative 2 would develop the Project Site in accordance with the parameters set forth by the existing zoning designations for the Project Site, which are R3-1-O (Multiple Residential, Height District 1, Oil Drilling) and C2-1VL-O (Commercial, Height District 1VL, Oil Drilling). As discussed above, Alternative 2 would develop 60 new residential units, 21,257 square feet of retail uses, and 21,257 square feet of office uses, consistent with the uses permitted by existing zoning. In accordance with existing zoning, the proposed buildings under Alternative 2 would range from 25 to 45 feet, or two to four stories. As previously discussed, Alternative 2 would also comply with the FAR of 1.5:1 on the C2-zoned parcels and 3:1 on the R3-zoned parcels. In addition, since Alternative 2 would comply with the permitted land use and existing zoning requirements for the Project Site and would also include new uses located in an urbanized area with new pedestrian amenities and with access to transit, this alternative would also not conflict with the applicable plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect, including those set forth in the Los Angeles General Plan, including the Framework Element, Los Angeles General Plan Housing Element (Housing

Element), Los Angeles Conservation Element, and Mobility Plan 2035; the West Los Angeles Community Plan; the Citywide Design Guidelines; and SCAG's 2016-2040 and 2020-2045 RTP/SCS. Thus, impacts related to consistency with land use plans would be less than significant and less than the less-than-significant impacts of the Project since Alternative 2 would require fewer discretionary actions.

f. Noise

(1) Noise

(a) Construction

The types of construction activities under Alternative 2 would be substantially similar to the Project, although the amount of construction activities and duration would be reduced due to the reduction in total floor area (from 241,754 sf to 154,105 sf) and the reduced amount of excavation associated with the subterranean parking levels. As with the Project, construction of Alternative 2 would generate noise from the use of heavy-duty construction equipment as well as from haul truck and construction worker trips. Due to the close proximity of the sensitive receptors (i.e., directly adjacent the Project Site), it would not be feasible to mitigate the on-site construction noise impacts of the Project, especially at receptor locations R1, R2 and R6. In addition, on- and off-site construction activities and the associated construction noise levels under Alternative 2 would be expected to be similar to that of the Project during maximum activity days since the daily intensity of construction activities would be the same under Alternative 2, even though the overall amount and duration of construction would decrease when compared to the Project. As such, noise levels during maximum activity days, which are used for measuring impact significance, would be similar to those of the Project. Accordingly, noise impacts due to on- and off-site construction activities under Alternative 2 would be similar to those of the Project. As with the Project, Alternative 2 would implement Project Design Features NOI-PDF-1 (requiring muffling of power construction equipment) and NOI-PDF-4 (prohibiting use of impact piles, and distance limits for heavy construction equipment), and Mitigation Measure NOI-MM-1 (requiring temporary sound barriers) to reduce noise levels during construction. Similar to the Project, on-site construction noise would be significant and unavoidable under Alternative 2 even with the application of project design features and mitigation measures. In addition, cumulative on- and off-site noise impacts during Alternative 2 construction would be significant and unavoidable, similar to the Project. Overall, construction noise impacts under Alternative 2 would be similar to those of the Project.

(b) Operation

As discussed in Section IV.F, Noise, of this Draft EIR, sources of operational noise under the Project include: (a) on-site stationary noise sources, including mechanical

equipment, activities within the proposed outdoor spaces, parking facilities, loading dock and trash collection areas; and (b) off-site mobile (roadway traffic) noise sources. Alternative 2 would introduce noise from similar on-site and off-site noise sources as the Project. However, it is anticipated that with the overall reduction in total floor area and uses, the noise levels from building mechanical equipment , and outdoor spaces, would be reduced. While loading operations would increase with the office/retail use, the noise levels associated with the loading operation would be similar to the Project (i.e., it Is expected that one delivery truck at a time would occur). In addition, similar to the Project, Alternative 2 would include Project Design Features NOI-PDF-2, -3, and -5 that require screening of outdoor mounted mechanical equipment and loading docks and specify sound levels for outdoor sound systems, if any. Although Alternative 2 would include more parking spaces than the Project (247 versus 140 parking spaces), noise levels associated with parking operation would be similar, as the parking spaces are within the enclosed subterranean levels. Thus, operational on-site noise impacts would be less than significant and less than the less-than-significant impacts of the Project due to reduction in total floor area and uses proposed.

With regard to off-site noise sources, Alternative 2 would result in an increase in daily vehicle trips compared to the Project. Specifically, Alternative 2 would result in an increase of 638 daily vehicle trips, as compared to a reduction of 75 daily vehicle trips under the Project. The increase in vehicle trips would result in an increase in off-site traffic-related noise levels under Alternative 2.[3] Typically, a doubling of traffic volumes would result in an increase of 3 dBA. However, when taking into account the existing volumes on the roadway, Alternative 2 traffic would result in an increase of approximately 1.4 percent and 1.2 percent in the daily traffic along Olympic Boulevard and Kerwood Avenue (the two roadway segments nearest to the Project Site), respectively.[4] The increase in the traffic volumes would result in a maximum noise increase 0.1 dBA along Olympic Boulevard and Kerwood Avenue.[5] The estimated noise level increase along Olympic Boulevard under Alternative 2 would be well below the 3-dBA significance criteria applicable when noise levels falls within the normally unacceptable land use category (between 70 dBA and 75 dBA CNEL). Similarly, the estimated noise level increase along Kerwood Avenue would be well below the 5 dBA Community Noise Equivalent Level (CNEL) significance threshold applicable when noise levels fall within the conditionally acceptable land use category (between 60 dBA and 70 dBA CNEL). Therefore, off-site noise impacts under Alternative 2

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[3] *Gibson Transportation Consulting, Inc., "Transportation Analysis of Project Alternatives to the Senior Residential Community at the Bellwood Los Angeles, California," May 11, 2021. See Appendix H.3 of this Draft EIR.*

[4] *Detailed calculations are provided in Appendix F.*

[5] *Traffic noise level increase in decibel is calculated based on logarithmic basic. 0.1 dBA increase = 10*log(1.014)*

would be greater than those of the Project due to the increase in vehicle trips; however, impacts would remain less than significant as for the Project.

(2) Vibration

(a) Construction

As noted above, the types of construction activities under Alternative 2 would be similar to the Project, although the amount and duration of construction activities would be slightly reduced. As with the Project, construction of the Commercial/Residential Alternative would generate vibration from the use of heavy-duty construction equipment as well as from truck trips. While the overall amount of construction would be reduced, on- and off-site construction activities and the associated construction vibration levels would be expected to be similar to those of the Project, as construction vibration impacts are evaluated based on the maximum (peak) vibration levels generated by each type of construction equipment. As such, peak vibration levels generated by the construction equipment would be similar to those of the Project. Accordingly, vibration impacts due to on- and off-site construction activities under Alternative 2 would similarly be less than significant for on-site and off-site construction vibration (building damage) and significant and unavoidable for on-site and off-site construction vibration (human annoyance). Overall, vibration impacts under Alternative 2 would be similar to the impacts of the Project.

(b) Operation

As described in Section IV.F, Noise, of this Draft EIR, sources of vibration related to operation of the Project would include vehicle circulation, delivery trucks, and building mechanical equipment. These same sources of operational vibration would occur under Alternative 2. As with the Project, vehicular-induced vibration from Alternative 2, including vehicle circulation within the subterranean parking area, would not generate perceptible vibration levels at off-site sensitive uses. In addition, like the Project, building mechanical equipment installed as part of Alternative 2 would include typical commercial-grade stationary mechanical equipment, such as air-condenser units (mounted at the roof level), that would include vibration-attenuation mounts to reduce vibration transmission such that the vibration would not be perceptible at the off-site sensitive receptors. Therefore, as with the Project, operation of Alternative 2 would not result in the generation of excessive ground-borne vibration levels that would be perceptible in the vicinity of the Project Site. As such, vibration impacts associated with operation of Alternative 2 would be less than significant and similar to the Project.

g. Population and Housing

Alternative 2 would be constructed within the same Project Site as the Project. As discussed in Section II, Project Description, of this Draft EIR, the Project Site is currently

developed with three multi-family residential developments comprising a total of 43,939 square feet with a total of 112 units. The majority of the existing housing units are studio units, and the existing units range in size from approximately 275 to 375 square feet. Similar to the Project, the removal of the existing residential units under Alternative 2 would be subject to the requirements of the City's Rent Stabilization Ordinance (RSO) and Ellis Act. As previously described, Alternative 2 would construct approximately 111,591 square feet of residential uses with 60 new residential units.[6] While the proposed housing units would not increase the overall availability of housing units on-site, the size of residential development and type of units would increase, thus the number of bedrooms and overall total number of residents may be similar to the existing uses.[7] With compliance with the relocation assistance requirements of the RSO and Ellis Act, the displacement of people and existing housing units would not be considered substantial requiring the construction of replacement housing elsewhere. Impacts with regard to displacing a substantial number of existing people or housing would be less than significant and greater than the less-than-significant impacts of the Project due to the decreased availability of housing units for residents on-site under Alternative 2.[8]

h. Public Services

(1) Fire Protection

(a) Construction

As previously discussed, the types of construction activities required for Alternative 2 would be similar to that of the Project. However, the overall amount and duration of construction activities would be reduced compared to the Project due to the reduction in development. In addition, like the Project, construction would occur in compliance with all applicable federal, state, and local requirements concerning the handling, disposal, use, storage, and management of hazardous waste. Thus, compliance with regulatory requirements would effectively reduce the potential for construction activities to expose people to the risk of fire or explosion related to hazardous materials and the associated potential need for fire protection services.

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[6] *Unlike the Project, the housing units would not be in an eldercare facility providing senior community care services.*

[7] *Using the household size of 2.25 from the City's VMT calculator, Alternative 2 would generate approximately 135 residents. The 112 existing housing units are predominantly studio units and thus would be expected to have a household size of one person per unit. As such, Alternative 2 would be expected to result in an increase of approximately 23 residents within the Project Site when compared with existing conditions.*

[8] *The Project is anticipated to generate 231 residents when compared with the 135 residents generated by Alternative 2 and would provide a greater amount of overall housing units on the Project Site as compared to Alternative 2.*

Similar to the Project, travel lanes would be maintained in each direction on all streets around the Project Site throughout the construction period and emergency access would not be impeded. Also similar to the Project, Alternative 2 would be required to implement Project Design Feature TR-PDF-1, which would require a Construction Management Plan to ensure that adequate and safe access is available within and near the Project Site during construction activities.

Construction activities would also generate traffic associated with the movement of construction equipment, the hauling of soil and construction materials to and from the Project Site, and construction worker traffic. However, Alternative 2 would implement a similar design feature in order to allow the majority of construction-related traffic, including hauling activities and construction worker trips, to occur outside the typical weekday commuter A.M. and P.M. peak periods, thereby reducing the potential for traffic-related conflicts. In addition, as mentioned above, a Construction Management Plan would be implemented to ensure that adequate and safe access remains available within and near the Project Site during construction activities. Therefore, construction activities would not result in the need for new or physically altered governmental facilities (fire protection), the construction of which would cause significant environmental impacts, in order to maintain service. Impacts under Alternative 2 would be less than significant and less when compared to the less-than-significant impacts of the Project due to the reduction in construction activities and duration.

(b) Operation

Alternative 2 would generate a new residential population, as well as a new visitor and employee population on the Project Site that would contribute to an increase in demand for LAFD fire protection and emergency medical services. Specifically, Alternative 2 would generate approximately 135 new residents.[9] As such, Alternative 2 would result in a lower residential service population when compared to the 231 new residents generated by the Project.[10] In addition, Alternative 2 would provide for 21,257 square feet of retail uses and 21,257 square feet of office uses, which would generate approximately 128 employees.[11] As such, Alternative 2 would result in a greater employee service population

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[9] *Based on City of Los Angeles VMT Calculator Documentation (Version 1.3), May 2020, Table 1: Land Use and Trip Generation Base Assumptions. Gibson Transportation Consulting, Inc., "Transportation Analysis of Project Alternatives to the Senior Residential Community at the Bellwood Los Angeles, California," May 11, 2021. See Appendix H.3 of this Draft EIR.*

[10] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H.1.*

[11] *Based on the City of Los Angeles VMT Calculator Documentation Guide, Table 1, May 2020, the rate 0.002 employee per square foot for "General Retail" land use is applied to the 21,257 square feet of retail uses and the rate 0.004 employee per square foot for "General Office" land use is applied to the 21,257 square feet of office uses. Gibson Transportation Consulting, Inc., "Transportation Analysis of Project*

(Footnote continued on next page)

when compared to the 88 employees generated by the Project.[12] While Alternative 2 would increase the existing service population compared to existing conditions, the overall increased demand would be less than Project due to the lower service population. As such, the overall increased demand for LAFD fire protection and emergency medical services would be reduced compared to that of the Project. In addition, similar to the Project, Alternative 2 would implement all applicable City Building Code and Fire Code requirements regarding structural design, building materials, site access, fire flow, storage and management of hazardous materials, alarm and communications systems, etc. Similar to the Project, Alternative 2 would comply with the City's applicable emergency access requirements set forth by the Los Angeles Department of Building and Safety and LAFD. Alternative 2 would also not include the installation of barriers that could impede emergency vehicle access. As with the Project, the Los Angeles Department of Water and Power (LADWP) would be able to supply sufficient flow and pressure to satisfy the needs of the fire suppression for Alternative 2. Therefore, similar to the Project, impacts with regard to LAFD fire protection during operation of Alternative 2 would be less than significant and would not require the addition of a new fire station or the expansion of an existing facility in order to maintain service. Operation of Alternative 2 would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities (fire protection), the construction of which would cause significant environmental impacts, in order to maintain acceptable fire protection services. Such impacts would be less than the less-than-significant impacts of the Project due to the reduction in development and reduced service population.

(2) Police Protection

(a) Construction

As previously described, the types of construction activities required for Alternative 2 would be similar to that of the Project. However, the overall amount of construction activities and duration of construction would be reduced compared to the Project due to the reduction in development. Alternative 2 would also implement similar design features as the Project. Specifically, pursuant to Project Design Feature POL-PDF-1, Alternative 2 would be required to provide temporary security measures such as security fencing, lighting, and locked entry to secure the Project Site during construction, thereby reducing the demand for police protection services.

Alternatives to the Senior Residential Community at the Bellwood Los Angeles, California," May 11, 2021. See Appendix H.3 of this Draft EIR.

[12] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H.1.*

In addition, similar to the Project, travel lanes would be maintained in each direction on all streets around the Project Site throughout the construction period and emergency access would not be impeded. Also, similar to the Project, Alternative 2 would be required to implement Project Design Feature TR-PDF-1, which would require a Construction Management Plan to ensure that adequate and safe access is available within and near the Project Site during construction activities. Therefore, construction-related impacts to police protection services under Alternative 2 would be less than significant, and less than the less-than-significant impacts of the Project due to the reduction in construction activities and duration.

(b) Operation

Alternative 2 would generate a new residential population as well as a new visitor and employee population on the Project Site that would contribute to an increased demand for police services. Specifically, Alternative 2 would generate approximately 135 new residents.[13] As such, Alternative 2 would result in a lower residential service population when compared to the 231 new residents generated by the Project.[14] In addition, Alternative 2 would provide for 21,257 square feet of retail uses and 21,257 square feet of office uses, which would generate approximately 128 employees.[15] As such, Alternative 2 would result in a greater employee service population when compared to the 88 employees generated by the Project.[16] Nevertheless, as discussed in Section IV.H.2, Public Services—Police Protection, of this Draft EIR, the LAPD considers the residential population within their service area to evaluate service capacity. As such, while Alternative 2 would increase the existing police service population of the West Los Angeles Area compared to existing conditions, the increase would be less than the Project due to the lower residential service population. Like the Project, Alternative 2 would implement similar design features as the Project. Pursuant to Project Design Feature POL-PDF-2 through Project Design Feature POL-PDF-5, this alternative would be required to provide a closed-circuit security camera system; keycard entry for the buildings and parking areas; and appropriate lighting to ensure security. The design features would help offset the increase in demand for police

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[13] *Based on City of Los Angeles VMT Calculator Documentation (Version 1.3), May 2020, Table 1: Land Use and Trip Generation Base Assumptions. Gibson Transportation Consulting, Inc., "Transportation Analysis of Project Alternatives to the Senior Residential Community at the Bellwood Los Angeles, California," May 11, 2021. See Appendix H.3 of this Draft EIR.*

[14] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H.1.*

[15] *Based on the City of Los Angeles VMT Calculator Documentation Guide, Table 1, May 2020, the rate 0.002 employee per square foot for "General Retail" land use is applied to the 21,257 square feet of retail uses and the rate 0.004 employee per square foot for "General Office" land use is applied to the 21,257 square feet of office uses. Gibson Transportation Consulting, Inc., "Transportation Analysis of Project Alternatives to the Senior Residential Community at the Bellwood Los Angeles, California," May 11, 2021. See Appendix H.3 of this Draft EIR.*

[16] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H.1.*

protection services generated by Alternative 2. Thus, as with the Project, Alternative 2 would not result in the need for new or physically altered police protection facilities, the construction of which would cause significant environmental impacts, in order to maintain service. As such, the impact on police protection services under Alternative 2 would be less than significant, and less than the less-than-significant impacts of the Project.

i. Transportation

As discussed above, Alternative 2 would be developed within the same Project Site as the Project, though the portion of Bellwood Avenue that bisects the Project Site would remain in its existing alignment. Consistent with the Project, Alternative 2 would be designed to generally conform with the applicable programs, plans, ordinances, or policies regarding the circulation system including those set forth in the Mobility Plan; Citywide Design Guideline 2; Plan for a Healthy Los Angeles; and the LAMC. Additionally, Alternative 2 would not preclude the City from implementing future improvements to serve the long-term mobility needs of the City. Furthermore, as discussed further below, impacts with respect to VMT would be less than significant, similar to the Project. Therefore, impacts associated with a potential conflict with a program, plan, ordinance, or policy addressing the circulation system would be similar to the Project's less than significant impacts.

When accounting for the same project design features as the Project, Alternative 2 would result in a greater daily VMT when compared to the Project. Specifically, as shown in Appendix H of this Draft EIR, Alternative 2 would result in 5,631 total net daily VMT, which would be comparatively greater than the 39 net daily VMT generated by the Project.[17] Based on the population assumptions, this Alternative would generate an average household VMT of 4.8 per capita and an average work VMT per employee of 9.1.[18] The average household VMT per capita for Alternative 2 would still fall below the significance threshold of household VMT of 7.4 and the average work VMT per employee of 11.1 for the West Los Angeles Area Planning Commission area. Therefore, impacts with respect to conflicts with CEQA Guidelines Section 15064.3, subdivision (b) would be less-than-significant and greater than the impacts of the Project.

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[17] *Gibson Transportation Consulting, Inc., "Transportation Analysis of Project Alternatives to the Senior Residential Community at the Bellwood Los Angeles, California," May 11, 2021. See Appendix H.3 of this Draft EIR.*

[18] *Gibson Transportation Consulting, Inc., "Transportation Analysis of Project Alternatives to the Senior Residential Community at the Bellwood Los Angeles, California," May 11, 2021. See Appendix H.3 of this Draft EIR.*

Alternative 2 would reduce the number of driveways compared to existing conditions. Specifically, access to the Project Site would be provided via four driveways along Bellwood Avenue. Similar to the Project, driveways under Alternative 2 would be designed, placed, and configured in accordance with LADOT's *Manual of Polices and Procedures* to limit vehicle queue and bicycle/pedestrian-vehicle conflicts. In addition, the driveways would be designed and located at a distance from Olympic Boulevard to limit queue spillovers into the public right-of-way (ROW) and reduce interruptions to pedestrian/bicycle flow and safety. Therefore, similar to the Project, impacts would be less than significant. Lastly, similar to the Project, construction activities under Alternative 2 could potentially impact the provision of emergency services by the LAFD and the LAPD in the vicinity of the Project Site as a result of construction impacts to the surrounding roadways. Although Alternative 2 would not involve the vacation and realignment of Bellwood Avenue as proposed under the Project, Alternative 2 may require infrastructure improvements or upgrades that could temporarily necessitate lane closures on nearby roadways. However, Alternative 2 would also be required to implement Project Design Feature TR-PDF-1 which would require a Construction Management Plan to be implemented to ensure that adequate and safe access remains available within and near the Project Site during construction activities. Appropriate construction traffic control measures (e.g., detour signage, delineators, etc.) would also be implemented, as necessary, to ensure emergency access to the Project Site and to ensure traffic flow is maintained on adjacent right-of-ways, as well as on the City-designated disaster route along Olympic Boulevard. With regard to operation, all driveways and internal circulation would be designed to meet all applicable City Building Code and Fire Code requirements regarding emergency access, and would not include the installation of barriers that could impede emergency vehicle access. Lastly, pursuant to California Vehicle Code Section 21806, the drivers of emergency vehicles are generally able to avoid traffic in the event of an emergency by using sirens to clear a path of travel or by driving in the lanes of opposing traffic. Therefore, Alternative 2 would result in less than significant emergency access impacts that would be similar to the less than significant impacts of the Project.

j. Tribal Cultural Resources

As previously discussed, Alternative 2 would construct one to two subterranean parking levels that would extend to a maximum depth of 22 feet, a reduction of eight feet in the depth of grading as compared to the Project that would result in reduced overall excavation activities. Therefore, the potential for Alternative 2 to uncover subsurface tribal cultural resources would be reduced compared to that of the Project. As discussed in Section IV.J, Tribal Cultural Resources, of this Draft EIR, no known tribal cultural resources have been identified within the Project Site or within 0.5-mile of the Project Site. Nevertheless, Alternative 2 would also implement the City's standard condition of approval to address inadvertent discovery of tribal cultural resources. As such, like the Project, impacts to tribal cultural resources would be less than significant and less than the impacts

of the Project due to the reduction in excavation associated with subterranean parking levels.

k. Utilities and Service Systems

(1) Water Supply and Infrastructure

(a) Construction

Similar to the Project, construction activities associated with Alternative 2 would generate a short-term demand for water. This demand would only be slightly reduced with the reduction in construction activities and duration compared to the Project. As evaluated in Section IV.K.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR, the Project's temporary and intermittent demand for water during construction could be met by the City's available supplies during each year of construction. Since the water demand for construction activities associated with Alternative 2 would be reduced, the temporary and intermittent demand for water during construction of Alternative 2 would similarly be expected to be met by the City's available water supplies.

As with the Project, Alternative 2 would require new on-site water distribution lines to serve the new buildings and uses and may require the upgrade of existing water lines. Similar to the Project, the connection and installation of water distribution lines would primarily involve trenching to place the lines below the surface. As with the Project, prior to ground disturbance, Project contractors would coordinate with LADWP to identify the locations and depths of all lines and to avoid existing water lines and disruption of water service. Furthermore, LADWP would be notified in advance of proposed ground disturbance activities to avoid disruption of water service. LADWP would review and approve all appropriate connection requirements, pipe depths, and connection location(s). In addition, given that construction activities could temporarily affect access in adjacent rights-of-way, a Construction Management Plan, similar to the Project, would also be implemented as part of the Commercial/Residential Alternative to ensure adequate and safe access remains available within and near the Project Site during construction. Overall, impacts on water supply and infrastructure associated with construction activities would be less than significant under Alternative 2, and similar to the less-than-significant impacts of the Project.

(b) Operation

Based on the reduction in total development as compared to the Project, water demand for Alternative 2 would be less than the Project's estimated increase in water demand. Specifically, as shown in Table V-2 on page V-42, when accounting for the removal of existing uses, Alternative 2 would result in a net reduction of 2,318 gallons per day (gpd) in water demand compared to the Project's 25,941 gpd water demand. Thus, as

Table V-2
Estimated Water Consumption/Wastewater Generation for Alternative 2

Land Use	Unit	Generation Factor[a]	Total Water Demand/ Wastewater Generation (gpd)
Existing			
Residential	112 du	150 gpd/1,000 sf	16,800
Subtotal			*16,800*
Proposed			
Residential	60 du	190 gpd/du	11,400
Retail	21,257 sf	25 gpd/1,000 sf	531
Office	21,257 sf	120 gpd/1,000 sf	2,551
Subtotal			*14,482*
Total Net Water Demand/ Wastewater Generation			**-2,318**

du = dwelling unit
gpd = gallons per day
sf = square feet
[a] *Sewage generation calculations are based on generation factors provided by City of Los Angeles Bureau of Sanitation (LASAN).*
Source: Eyestone Environmental, 2021.

with the Project, the estimated water demand under Alternative 2 would not exceed the available supplies projected to be available by LADWP. Specifically, the estimated water demand under Alternative 2 would also be within the available and projected water supplies for normal, single-dry, and multi-dry years through the year 2040. Furthermore, similar to the Project, Alternative 2 would construct the necessary on-site water infrastructure and off-site connections to the LADWP water system pursuant to applicable City requirements to accommodate the new buildings. Thus, impacts to water supply under Alternative 2 would be less than significant, and less than the less-than-significant impacts of the Project.

(2) Wastewater

(a) Construction

As with the Project, wastewater generation during construction of Alternative 2 would be temporary and nominal when compared with the Project Site wastewater generation under existing conditions. Furthermore, construction workers would typically utilize portable restrooms and hand wash areas, which would not contribute to wastewater flows to the City's wastewater system. Thus, wastewater generation from construction

activities under Alternative 2 is not anticipated to cause a measurable increase in wastewater flows.

As with the Project, Alternative 2 may require construction of on-site wastewater infrastructure to serve the new buildings, and potential limited extension/upgrade and/or relocation of existing adjacent public wastewater infrastructure. Similar to the Project, these construction activities would primarily be confined to trenching and would be limited to the on-site wastewater distribution as well as minor off-site work associated with connections to the public main. In addition, given that construction activities could temporarily affect access in adjacent rights-of-way, a Construction Management Plan, similar to the Project, would also be implemented as part of Alternative 2 to ensure adequate and safe access remains available within and near the Project Site during construction. Therefore, similar to the Project, construction-related impacts to the wastewater system under Alternative 2 would be less than significant and similar to the less-than-significant impacts of the Project.

(b) Operation

As with the Project, operation of Alternative 2 would generate greater wastewater flows relative to existing conditions. However, based on the reduction in total development as compared to the Project, wastewater generation under Alternative 2 would be less than the Project's estimated wastewater flow. Specifically, as shown in Table V-2 on page V-42, when accounting for the removal of existing uses, Alternative 2 would result in a net reduction of 2,318 gpd in wastewater when compared to the Project's 25,941 gpd wastewater flow. As provided in Section IV.K.2, Utilities and Service Systems—Wastewater, of this Draft EIR, the Project-generated wastewater could be accommodated by the existing capacity of the Hyperion Water Reclamation Plant (HWRP). Therefore, it is anticipated that the wastewater generated by Alternative 2 could also be accommodated by the existing capacity of the HWRP, and impacts with respect to treatment capacity would be less than significant.

Similar to the Project, sewer service for Alternative 2 would be provided by utilizing new on-site sewer connections to the existing sewer lines adjacent to the Project Site. Given that the wastewater flows generated by Alternative 2 would be less than the estimated wastewater flows of the Project, it is anticipated that there would be sufficient capacity within the sewer lines serving the Project Site to serve the wastewater flows of Alternative 2. Furthermore, all related sanitary sewer connections and on-site infrastructure under Alternative 2 would be designed and constructed in accordance with applicable standards.

Based on the above, impacts with regard to wastewater generation and infrastructure capacity under Alternative 2 would be less than significant, and less than the less than significant impacts of the Project.

(3) Energy Infrastructure

(a) Construction

The energy consumed by Alternative 2 would be slightly reduced compared to the Project due to the reduced construction activities and duration. As LADWP has confirmed that the supply and existing infrastructure in the Project area would have the capacity to serve the Project Site, the existing infrastructure would similarly have capacity to supply energy for Alternative 2. Therefore, impacts on infrastructure capacity associated with short-term construction activities under Alternative 2 would be less than significant and less than the less-than-significant impacts of the Project due to the reduced construction activities.

(b) Operation

As with the Project, operation of Alternative 2 would generate an increased consumption of electricity and natural gas relative to existing conditions. However, based on the uses and the reduced amount of total floor area proposed under Alternative 2, the total energy consumption of Alternative 2 would be less than the total energy consumption of the Project. Therefore, impacts to infrastructure capacity under Alternative 2 would be less than significant, and less than the less-than-significant impacts of the Project.

3. Comparison of Impacts

As evaluated above, Alternative 2 would not eliminate the Project's significant and unavoidable impacts related to on-site noise during construction and to on-site and off-site vibration during construction (pursuant to the threshold for human annoyance). Cumulative impacts with respect to on-site and off-site noise during construction and with respect to vibration impacts associated with off-site vibration during construction (pursuant to the significance threshold for human annoyance) would also remain significant and unavoidable. Additionally, Alternative 2 would result in greater impacts associated with air quality and GHG emissions, off-site mobile noise, housing displacement, and transportation (VMT) compared to the Project; however, these impacts would remain less than significant. Alternative 2 would reduce several of the less than significant impacts associated with the Project (e.g., the less than significant impacts associated with TACs during construction, energy efficiency during construction, land use consistency, on-site operational noise, tribal cultural resources, police and fire protection services, water and wastewater during operation, and energy infrastructure). All other impacts would be similar to those of the Project.

4. Relationship of the Alternative to Project Objectives

Alternative 2 would develop 60 new multi-family residential units, 21,257 square feet of retail uses, and 21,257 square feet of office uses. Alternative 2 would not vacate and realign the portion of Bellwood Avenue that bisects the Project Site. The new residential units under Alternative 2 would not be designated senior housing units. As such, Alternative 2 would not meet the Project's underlying purpose to provide a senior residential housing community that meets the needs of an increasingly aging population in the City by providing variety in housing together with integrated services. Alternative 2 would also not meet the following Project objectives:

- Promote adequate housing that is accessible to senior citizens by providing a new senior-only housing residential community that meets the daily living needs of the City's aging adult population, including recreational and social needs on-site, advancing the West Los Angeles Community Plan Objective 1-4 and supporting General Plan (Housing Element) Objective 1.1 to provide housing to meet current and projected needs.

- Develop senior-independent units, assisted living guest rooms, and memory care guest rooms to help meet the specific housing needs of the City's aging population, consistent with General Plan (Housing Element) Objective 1.1, and Policy 1.1.3, and West Los Angeles Community Plan Objective 1-1 to construct a range of different housing types that address the diverse needs of the City's existing residents and projected population.

- Locate senior citizen housing within reasonable walking distance of health and community facilities, services and public transportation by integrating supporting services with the senior housing units in one building, supporting the West Los Angeles Community Plan Policy 1-2.2.

- Provide a range of on-site recreational, health, wellness and dining activities and services to support the daily needs of seniors and promote safety and health consistent with General Plan (Housing Element) Objective 2.1.

- Unify the Project Site to maximize efficient use of the site and associated parcels and orient development to and respond to the low- to mid-scale character of surrounding land uses while maintaining adequate public circulation.

V. Alternatives

C. Alternative 3: Senior Residential Alternative

1. Description of the Alternative

Alternative 3 would develop 130 senior residential units within the Project Site in accordance with the existing R3-1-O (Multiple Residential, Height District 1, Oil Drilling) and C2-1VL-O (Commercial, Height District 1VL, Oil Drilling). The new residential units would be designated senior housing units but would not be in an eldercare facility or include integrated services or care. Under Alternative 3, the portion of Bellwood Avenue that bisects the Project Site would remain a public street in its current alignment. A conceptual site plan of Alternative 3 is provided in Figure V-2 on page V-47. As with the Project, the three existing multi-family residential developments comprising a total of 43,939 square feet and including 112 residential units would be removed to accommodate Alternative 3. The proposed senior residential units would be built within three primary structures ranging from three stories and 35 feet in height to four stories and 45 feet in height. With regard to vehicular parking, Alternative 3 would provide a total of 260 parking spaces. These parking spaces would be provided within one subterranean parking level under the larger four-story residential building and in one subterranean parking level and one at-grade parking level for the other residential buildings (with residential units provided above the ground floor parking level for each of those two buildings, which may also include common area or lobby space). The subterranean parking levels under Alternative 3 would extend to a maximum depth of 12 feet (a reduction in the depth of grading of approximately 18 feet with an overall reduction in grading when compared to the Project). As with the Project, Alternative 3 would provide a variety of open spaces for the proposed residential uses. Specifically, in accordance with the LAMC, Alternative 3 would provide for approximately 22,750 square feet of open space. Overall, this alternative would construct approximately 154,105 square feet of new floor area compared to the Project's 241,754 square feet of new floor area and would result in a floor area ratio of 1.5:1 on the C2-zoned parcels and 3:1 on the R3-zoned parcels.

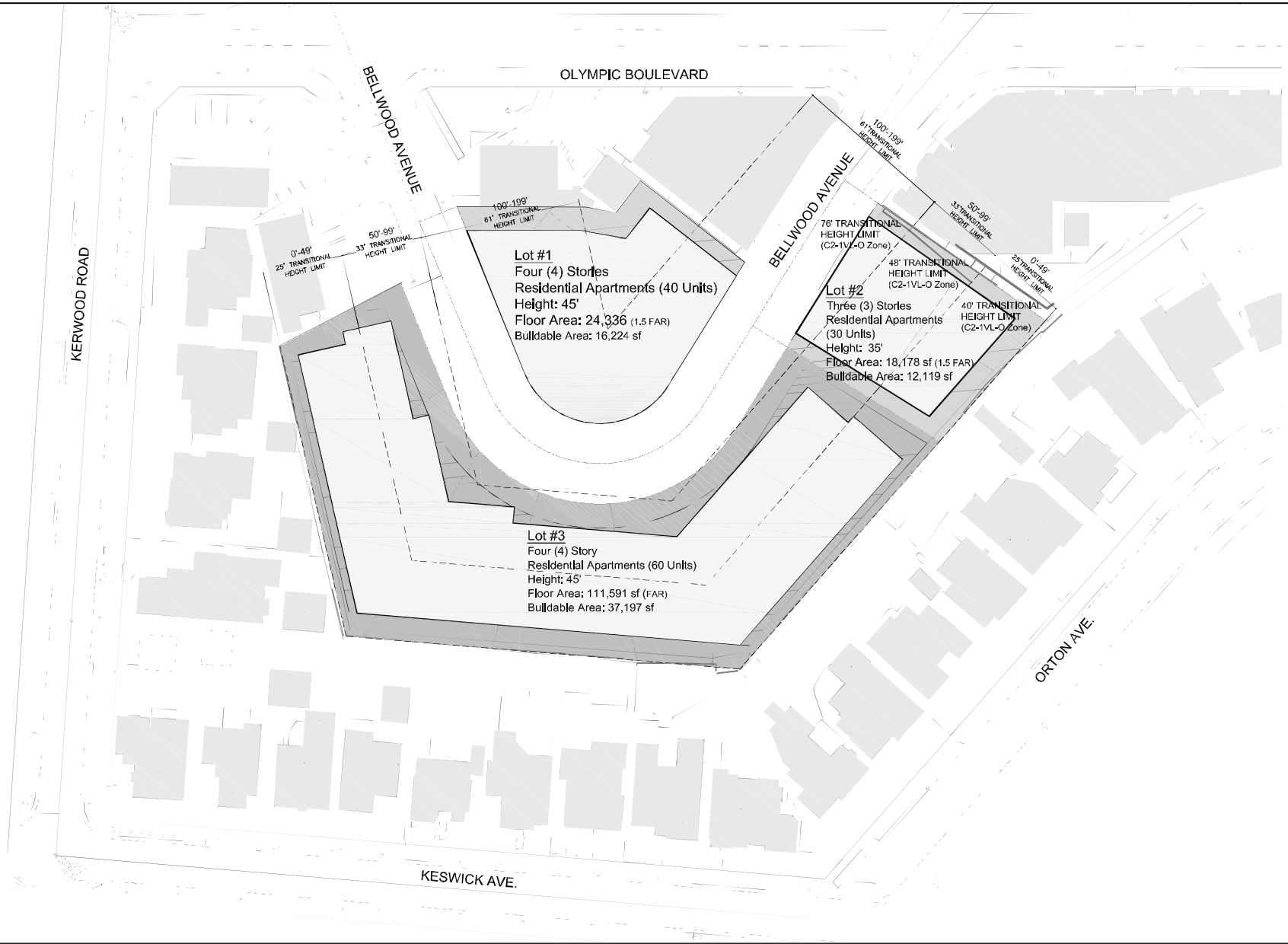

Figure V-2

Alternative 3 Conceptual Site Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2021.

2. Environmental Impacts

a. Aesthetics

As discussed in Section IV.A, Aesthetics, of this Draft EIR, a number of local plans, policies, and regulations related to scenic quality are applicable to the Project Site, including the Framework Element, Conservation Element, the Community Plan, the Citywide Urban Design Guidelines, and the LAMC. As described above, the Senior Residential Alternative would develop the Project Site in accordance with the existing zoning designations of R3-1-O (Multiple Residential, Height District 1, Oil Drilling) and C2-1VL-O (Commercial, Height District 1VL, Oil Drilling). As previously discussed, Alternative 3 would replace the existing uses on-site with 130 new senior residential units. Similar to the Project, Alternative 3 would complement the uses surrounding the Project Site and would be designed consistent with relevant plans related to scenic quality, including promoting pedestrian activity and further activating the streets in the vicinity of the Project Site by placing new residents in close proximity to nearby off-site retail. Similar to the building proposed under the Project, new buildings under Alternative 3 would be designed to complement the existing surrounding uses and respond to the low- to mid-scale character of the surrounding area, also consistent with relevant plans related to scenic quality. Overall, similar to the Project, Alternative 3 also would not conflict with the zoning and other regulations governing scenic quality detailed in Section IV.A, Aesthetics, of this Draft EIR. Thus, impacts would be less than significant and similar to those of the Project.

b. Air Quality

(1) Regional Emissions

(a) Construction

As with the Project, construction of Alternative 3 has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Project Site. In addition, fugitive dust emissions would result from demolition and construction activities. As discussed in Section IV.B, Air Quality, of this Draft EIR, construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

Under Alternative 3, construction activity would be reduced in comparison to the Project due to the reduction in overall development. However, the intensity of air emissions and fugitive dust from site preparation and construction activities would be similar on days with maximum construction activities. Because maximum daily conditions are used for measuring impact significance, regional and localized impacts on these days would be

similar to the less than significant impacts of the Project. Therefore, as with the Project, Alternative 3 would result in less than significant impacts, and impacts would be similar to those of the Project.

(b) Operation

As previously discussed, the development proposed under Alternative 3 would be reduced compared to the Project. Based on the proposed uses, the number of net daily trips generated by Alternative 3 would be less than the number of daily trips generated by the Project. Specifically, as provided in Appendix H of this Draft EIR, Alternative 3 would result in a net reduction of 134 daily vehicle trips, which would be comparatively less than the Project's net reduction of 75 daily trips. Operational regional air pollutant emissions associated with Alternative 3 would be generated by vehicle trips and daily VMT to the Project Site, which are the largest contributors to operational air pollutant emissions, and by the consumption of natural gas.[19]

As Alternative 3 would result in less daily trips and VMT, with the reduction in uses and overall floor area, both area sources and stationary sources would result in reduced on-site operational air emissions associated with energy consumption compared to the Project. As a result, the overall pollutant emissions generated by Alternative 3 would be less than the emissions generated by the Project. Therefore, impacts associated with regional air pollutant emissions during operation of Alternative 3 would be less than significant and less than the less than significant impacts of the Project.

(2) Localized Emissions

(a) Construction

On-site construction activities under Alternative 3 would be located at similar distances from sensitive receptors as the Project. Although Alternative 3 would result in a reduction in the amount of proposed development compared to the Project, the intensity of construction activities would be similar on days with maximum construction activities. Because maximum daily conditions are used for measuring impact significance, localized impacts on these days would be similar to the less than significant impacts of the Project. Therefore, as with the Project, localized impacts under Alternative 3 would be less than significant, and similar to the less-than-significant impacts of the Project.

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[19] *It should be noted that criteria pollutant emissions are not calculated for electricity usage, consistent with SCAQMD and CalEEMod methodology. Criteria pollutant emissions from power plants are subject to local, state, and federal control measures, which can be considered to be the maximum feasible level of mitigation for power plant emissions.*

(b) Operation

Localized operational impacts are determined primarily by peak-hour intersection traffic volumes and on-site area and stationary sources. As provided in Appendix H of this Draft EIR, Alternative 3 would result in a net reduction of 24 vehicle trips during the A.M. peak hour and 28 trips during the P.M. peak hour. This alternative would generate fewer peak-hour trips compared to the Project's net reduction of 16 A.M. peak-hour trips and 9 P.M. peak-hour trips. As such, total vehicular emissions would be less compared to the Project. The development proposed under Alternative 3 would be reduced compared to the Project; therefore, area and stationary sources would generate less on-site operational air emissions compared to the Project. With the decrease in localized vehicle emissions and on-site emissions, overall localized emissions under Alternative 3 would be less the Project. As such, under Alternative 3, total contributions to localized air pollutant emissions during operation would be less than the Project's contribution. Accordingly, localized air quality impacts under Alternative 3 would be less than significant, and less than the less-than-significant impacts of the Project.

(3) Toxic Air Contaminants

(a) Construction

As with the Project, construction of Alternative 3 would generate diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. These activities represent the greatest potential for TAC emissions. As discussed in Section IV.B, Air Quality, of this Draft EIR, the Project would result in less-than-significant impacts with regard to TAC emissions. Overall construction TAC emissions generated by Alternative 3 would be less than those of the Project since excavation activities required during construction of Alternative 3 and overall construction would be reduced under this alternative. Thus, impacts due to TAC emissions and the corresponding individual cancer risk under Alternative 3 would be less than significant, and less than the impacts of the Project.

(b) Operation

As set forth in Section IV.B, Air Quality, of this Draft EIR, the primary sources of potential TACs associated with Project operations would include DPM from delivery trucks. Under Alternative 3, the number of deliveries and associated diesel particulate matter emissions would be decreased somewhat compared to the Project due to the decrease in the number of trips generated. Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes (e.g., chrome plating, electrical manufacturing, and a petroleum refinery). Similar to the Project, the land use proposed under Alternative 3 is not considered a land use that generates substantial TAC emissions. Therefore, Alternative 3 would not release substantial amounts of TACs. Impacts under Alternative 3

would be less than significant, and similar to than the less-than-significant impacts of the Project.

c. Energy

(1) Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources

(a) Construction

Similar to the Project, construction activities associated with Alternative 3 would consume electricity to supply and convey water for dust control and, on a limited basis, may be used to power lighting, electronic equipment, and other construction activities necessitating electrical power. Like the Project, construction activities associated with Alternative 3 would not involve the consumption of natural gas. As with the Project, Alternative 3 would also generate a demand for transportation energy associated with on- and off-road vehicles. However, the energy consumed during construction of Alternative 3 would be reduced compared to the Project due to the reduction in overall construction activities. As with the Project, construction equipment used during construction of Alternative 3 would comply with Title 24 requirements where applicable, CARB's anti-idling regulations as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Alternative 3 would also implement design features, similar to the Project, to reduce energy usage and fuel consumption during construction. Specifically, like the Project, Alternative 3 would implement AQ-PDF-1 which would require the use of electricity from power poles rather than temporary gasoline or diesel powered generators where available. Therefore, as with the Project, Alternative 3 construction activities would use energy that is not wasteful, inefficient, or unnecessary. Overall, impacts regarding energy use associated with short-term construction activities would be less than significant under Alternative 3 and less than the less-than-significant impacts of the Project due to the reduction in construction activities and duration.

(b) Operation

As with the Project, operation of the Senior Residential Alternative would generate an increased consumption of electricity, natural gas, and petroleum-based fuels relative to existing conditions. As previously discussed, Alternative 3 would construct 130 new senior residential units. As previously noted, the number of daily trips under Alternative 3 would be less when compared to the Project. As such, transportation fuel usage under Alternative 3 would be less in comparison to the Project. With the reduction in total floor area and residential units under Alternative 3, the consumption of electricity and natural gas, would be less than the Project. With the decrease in transportation fuel usage and decrease in on-site electricity and natural gas consumption, overall energy usage under Alternative 3 would be less than the Project. As with the Project, Alternative 3 would

implement design features to reduce energy usage. Specifically, like the Project, Alternative 3 would implement GHG-PDF-1 in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, which states that the design of new buildings would incorporate sustainability features (e.g., Energy Star–labeled products); incorporate water conservation features, such as drip/subsurface irrigation; and use LED lighting, which would reduce electricity used for lighting purposes compared to non-LED lighting. In addition, Alternative 3 would also incorporate GHG-PDF-2, which limits the number of natural gas-fueled fireplaces; therefore, reducing GHG emissions resulting from natural gas combustion. Accordingly, as with the Project, the consumption of electricity, natural gas, and petroleum-based fuels under Alternative 3 would not be wasteful, inefficient, or unnecessary. Overall, impacts related to energy use during operation of Alternative 3 would be less than significant and less than the less-than-significant impacts of the Project.

(2) Conflict with Plans for Renewable Energy or Energy Efficiency

As discussed in Section IV.C, Energy, of this Draft EIR, the energy conservation policies and plans relevant to the Project include the California Title 24 energy standards, the 2019 CALGreen Code, and the City of Los Angeles Green Building Code. As these conservation policies are mandatory under the City of LA Building Code, Alternative 3 would not conflict with applicable plans for renewable energy or energy efficiency.

With regard to transportation related energy usage, Alternative 3 would also comply with goals of the SCAG's 2016–2040 RTP/SCS and 2020–2045 RTP/SCS, which incorporate VMT targets established by SB 375. As with the Project, the uses proposed under Alternative 3 and their proximity to public transportation would serve to reduce VMT and associated transportation fuel usage within the region. In addition, vehicle trips generated during operations would comply with CAFE fuel economy standards. As with the Project, Alternative 3 would be required to comply with CARB anti-idling regulations and the In-Use Off-Road Diesel Fleet regulations during construction.

Therefore, based on the above, Alternative 3 would not conflict with plans for renewable energy or energy efficiency. Impacts related to renewable energy or energy efficiency plans would be less than significant under Alternative 3, and impacts would be similar to the less-than-significant impacts of the Project

d. Greenhouse Gas Emissions

GHG emissions from a development project are determined in large part by the number of daily trips generated and associated VMT, as well as energy consumption from proposed land uses. As previously discussed, the number of daily trips and daily VMT under Alternative 3 would decrease compared to the Project. With the reduction in square footage, Alternative 3 would also result in a decrease in energy and water consumption

compared to the Project. Overall, the amount of GHG emissions generated by Alternative 3 would be less than the amount generated by the Project. As with the Project, Alternative 3 would be designed to comply with the requirements of the CALGreen Code and the Los Angeles Green Building Code. Alternative 3 would also incorporate design features to reduce GHG emissions and would be designed to comply with the City's Green Building Ordinance, as applicable. With compliance with the CALGreen Code and the Los Angeles Green Building Code, and with the implementation of comparable sustainability features as the Project, Alternative 3 would also be consistent with the GHG reduction goals and objectives included in adopted state (Scoping Plan), regional, and local regulatory plans. Alternative 3 would also benefit from proximity to mass transit and proximity to retail and commercial uses resulting in a similar reduction in VMT in comparison to a project without trip reducing features. With the reduction in VMT and compliance with green building measures, Alternative 3 would also be consistent with the VMT reduction goals of the RTP/SCS. Thus, impacts related to GHG emissions under Alternative 3 would be less than significant and less than the less-than-significant impacts of the Project.

e. Land Use

As previously described, Alternative 3 would construct 130 new senior residential units. Under this alternative, the Project Site would be developed in accordance with the existing zoning designations of R3-1-O (Multiple Residential, Height District 1, Oil Drilling) and C2-1VL-O (Commercial, Height District 1VL, Oil Drilling). In accordance with LAMC, the proposed buildings under Alternative 3 would range from 35 to 45 feet, or three to four stories. As previously discussed, Alternative 3 would comply with the FAR of 1.5:1 on the C2-zoned parcels and 3:1 on the R3-zoned parcels. In addition, since Alternative 3 would comply with the permitted land use and existing zoning requirements for the Project Site and would also include new uses located in an urbanized area with new pedestrian amenities and with access to transit, Alternative 3 would also not conflict with the applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect, including those set forth in the Los Angeles General Plan, including the Framework Element, Housing Element, Conservation Element, and Mobility Plan 2035; the West Los Angeles Community Plan; the Citywide Design Guidelines; and the 2016–2040 and 2020–2045 RTP/SCS. Thus, as with the Project, the Senior Residential Alternative would not conflict with the applicable plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Thus, impacts related to consistency with land use plans would be less than significant and less than the less-than-significant impacts of the Project since Alternative 3 would require fewer discretionary actions.

f. Noise

(1) Noise

(a) Construction

The types of construction activities under Alternative 3 would be substantially similar to the Project, although the amount of construction activities and duration would be reduced due to the reduction in total floor area (from 241,754 sf to 154,105 sf) and reduced excavation associated with the subterranean parking levels. As with the Project, construction of Alternative 3 would generate noise from the use of heavy-duty construction equipment as well as from haul truck and construction worker trips. Due to the close proximity of the sensitive receptors (i.e., directly adjacent the Project Site), it would not be feasible to mitigate the on-site construction noise impacts of the Project, especially at receptor locations R1, R2 and R6. In addition, on- and off-site construction activities and the associated construction noise levels would be expected to be similar to that of the Project during maximum activity days since the daily intensity of construction activities would be similar under Alternative 3, even though the overall amount and duration would decrease when compared to the Project. As such, noise levels during maximum activity days, which are used for measuring impact significance, would be similar to those of the Project. Accordingly, noise impacts due to on- and off-site construction activities under Alternative 3 would be similar to those of the Project. As with the Project, Alternative 3 would implement Project Design Features NOI-PDF-1 (requiring muffling of power construction equipment) and NOI-PDF-4 (prohibiting use of impact piles, and distance limits for heavy construction equipment), and Mitigation Measure NOI-MM-1 (requiring temporary sound barriers) to reduce noise levels during construction. Similar to the Project, on-site construction noise would be significant and unavoidable under Alternative 3 even with the application of project design features and mitigation measures. In addition, cumulative on- and off-site noise impacts during Alternative 3 construction would be significant and unavoidable, similar to the Project. Overall, construction noise impacts under Alternative 3 would be similar to those of the Project.

(b) Operation

As discussed in Section IV.F, Noise, of this Draft EIR, sources of operational noise under the Project include: (a) on-site stationary noise sources, including mechanical equipment, activities within the proposed outdoor spaces, parking facilities, loading dock and trash collection areas; and (b) off-site mobile (roadway traffic) noise sources. Alternative 3 would introduce noise from similar on-site and off-site noise sources as the Project. However, it is anticipated that with the overall reduction in total floor area and uses, the noise levels from building mechanical equipment, and outdoor spaces, would be reduced. In addition, similar to the Project, Alternative 3 would include Project Design Features NOI-PDF-2, NOI-PDF-3, and NOI-PDF-5 that require screening of outdoor

mounted mechanical equipment and loading docks and specify sound levels for outdoor sound systems, if any. Alternative 3 would include more parking spaces than the Project (260 versus 140 parking spaces). Noise levels associated with parking operation would be higher, as Alternative 3 would include one at-grade parking level (under two of the residential buildings), located at the north and northeast portion of the Project Site. Noise levels associated with the parking spaces within the fully enclosed subterranean level would be similar to the Project. Overall, the operational on-site noise impacts associated with mechanical equipment, outdoor spaces, parking facilities, and trash collection area, would be similar to the less-than-significant impacts of the Project.

With regard to off-site noise sources, Alternative 3 would result in a reduction in daily vehicle trips compared to the Project. Specifically, Alternative 3 would result in a net reduction of 134 daily vehicle trips, as compared to a net reduction of 75 daily vehicle trips under the Project.[20] Similar to the Project, the reduction in the traffic volumes associated with Alternative 3 would not result in any noise increase. Therefore, off-site noise impacts under Alternative 3 would be less than those of the Project due to the reduction in vehicle trips; as such, impacts would remain less than significant and less than the Project.

(2) Vibration

(a) Construction

As noted above, the types of construction activities under Alternative 3 would be similar to the Project, although the amount and duration of construction activities would be slightly reduced. As with the Project, construction of the Senior Residential Alternative would generate vibration from the use of heavy-duty construction equipment as well as from truck trips. While the overall amount of construction would be reduced, on- and off-site construction activities and the associated construction vibration levels would be expected to be similar to those of the Project, as construction vibration impacts are evaluated based on the maximum (peak) vibration levels generated by each type of construction equipment. As such, peak vibration levels generated by the construction equipment would be similar to those of the Project. Accordingly, vibration impacts due to on- and off-site construction activities under Alternative 3 would similarly be less than significant for on-site and off-site construction vibration (building damage) and significant and unavoidable for on-site and off-site construction vibration (human annoyance). Overall, vibration impacts under Alternative 3 would be similar to the impacts of the Project.

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[20] *Gibson Transportation Consulting, Inc., "Transportation Analysis of Project Alternatives to the Senior Residential Community at the Bellwood Los Angeles, California," May 11, 2021. See Appendix H.3 of this Draft EIR.*

(b) Operation

As described in Section IV.F, Noise, of this Draft EIR, sources of vibration related to operation of the Project would include vehicle circulation, delivery trucks, and building mechanical equipment. These same sources of operational vibration would occur under Alternative 3. As with the Project, vehicular-induced vibration from Alternative 3, including vehicle circulation within the at-grade parking level and subterranean parking level, would not generate perceptible vibration levels at off-site sensitive uses. In addition, like the Project, building mechanical equipment installed as part of Alternative 3 would include typical commercial-grade stationary mechanical equipment, such as air-condenser units (mounted at the roof level), that would include vibration-attenuation mounts to reduce vibration transmission such that the vibration would not be perceptible at the off-site sensitive receptors. Therefore, as with the Project, operation of Alternative 3 would not result in the generation of excessive ground-borne vibration levels that would be perceptible in the vicinity of the Project Site. As such, vibration impacts associated with operation of Alternative 3 would be less than significant, and similar to the Project.

g. Population and Housing

Alternative 3 would be constructed within the same Project Site as the Project. As discussed in Section II, Project Description, of this Draft EIR, the Project Site is currently developed with three multi-family residential developments with a total of 112 units. Similar to the Project, the existing 112 residential units would be removed as part of Alternative 3. and the removal of the existing residential units would be subject to the requirements of the RSO and the Ellis Act. As discussed in Section II, Project Description, of this Draft EIR, the types and sizes of units currently on the Project Site are mostly studio and one-bedroom units (approximately 275 to 375 square feet in size). As such, although the residential units under Alternative 3 would be age-restricted, and Alternative 3 would displace existing residents, the Senior Residential Alternative would increase the overall number of housing units and residents on site upon completion when compared with existing conditions. Additionally, it is anticipated that senior residents will vacate their current residential housing elsewhere to move to the Project Site upon completion of the Alternative 3, thereby providing for the availability of other housing elsewhere. As such, similar to the Project, with compliance with the relocation assistance requirements of the RSO and Ellis Act, the displacement of existing residents would not be considered substantial requiring the construction of replacement housing elsewhere. Thus, impacts with regard to displacing a substantial number of existing people or housing would be less than significant and similar to the less-than-significant impacts of the Project.

h. Public Services

(1) Fire Protection

(a) Construction

As previously discussed, the types of construction activities required for Alternative 3 would be similar to that of the Project. However, the overall amount and duration of construction activities would be reduced compared to the Project due to the reduction in development. In addition, like the Project, construction would occur in compliance with all applicable federal, state, and local requirements concerning the handling, disposal, use, storage, and management of hazardous waste. Thus, compliance with regulatory requirements would effectively reduce the potential for construction activities to expose people to the risk of fire or explosion related to hazardous materials and the associated potential need for fire protection services.

Similar to the Project, travel lanes would be maintained in each direction on all streets around the Project Site throughout the construction period and emergency access would not be impeded. Similar to the Project, Alternative 3 would be required to implement Project Design Feature TR-PDF-1, which would require a Construction Management Plan to ensure that adequate and safe access is available within and near the Project Site during construction activities.

Construction activities would also generate traffic associated with the movement of construction equipment, the hauling of soil and construction materials to and from the Project Site, and construction worker traffic. However, Alternative 3 would implement a similar design feature in order to allow the majority of construction-related traffic, including hauling activities and construction worker trips, to occur outside the typical weekday commuter A.M. and P.M. peak periods, thereby reducing the potential for traffic-related conflicts. In addition, as mentioned above, a Construction Management Plan would be implemented to ensure that adequate and safe access remains available within and near the Project Site during construction activities. Therefore, construction activities would not result in the need for new or physically altered governmental facilities (fire protection), the construction of which would cause significant environmental impacts, in order to maintain service. Impacts under Alternative 3 would be less than significant and less when compared to the less-than-significant impacts of the Project due to the reduction in construction activities and duration.

(b) Operation

Alternative 3 would generate a new residential population that would contribute to an increase in demand for LAFD fire protection and emergency medical services. Specifically, Alternative 3 would generate approximately 158 new residents.[21] As such, Alternative 2 would result in a lower residential service population when compared to the 231 new residents generated by the Project.[22] Alternative 3 would not generate any new employees on-site. As such, the overall increased demand for LAFD fire protection and emergency medical services would be reduced compared to that of the Project. In addition, similar to the Project, Alternative 3 would implement all applicable City Building Code and Fire Code requirements regarding structural design, building materials, site access, fire flow, storage and management of hazardous materials, alarm and communications systems, etc. Similar to the Project, Alternative 3 would comply with the City's emergency access requirements set forth by the Los Angeles Department of Building and Safety and the LAFD. Alternative 3 would also not include the installation of barriers that could impede emergency vehicle access. As with the Project, LADWP would be able to supply sufficient flow and pressure to satisfy the needs of the fire suppression for Alternative 3. Therefore, similar to the Project, impacts with regard to LAFD fire protection during operation of Alternative 3 would be less than significant and would not require the addition of a new fire station or the expansion of an existing facility in order to maintain service. Operation of Alternative 3 would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities (fire protection), the construction of which would cause significant environmental impacts, in order to maintain acceptable fire protection services. Such impacts would be less than the less-than-significant impacts of the Project due to the reduction in total floor area and reduced service population.

(2) Police Protection

(a) Construction

As previously described, the types of construction activities required for Alternative 3 would be similar to that of the Project. However, the overall amount of construction activities and duration of construction would be reduced compared to the Project due to the reduction in development. Alternative 3 would also implement similar design features as the Project. Specifically, pursuant to Project Design Feature POL-PDF-1, Alternative 3 would be required to provide temporary security measures such as security fencing,

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[21] *Gibson Transportation Consulting, Inc., "Transportation Analysis of Project Alternatives to the Senior Residential Community at the Bellwood Los Angeles, California," May 11, 2021. See Appendix H.3 of this Draft EIR.*

[22] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H.1.*

lighting, and locked entry to secure the Project Site during construction, thereby reducing the demand for police protection services.

In addition, similar to the Project, travel lanes would be maintained in each direction on all streets around the Project Site throughout the construction period and emergency access would not be impeded. Similar to the Project, Alternative 3 would be required to implement Project Design Feature TR-PDF-1, which would require a Construction Management Plan to ensure that adequate and safe access is available within and near the Project Site during construction activities. Therefore, construction-related impacts to police protection services under Alternative 3 would be less than significant, and less than the less-than-significant impacts of the Project due to the reduction in construction activities and duration.

(b) Operation

As with the Project, Alternative 3 would generate a new residential population that would contribute to an increased demand for police services. Specifically, Alternative 3 would generate approximately 158 new residents.[23] As such, Alternative 3 would result in a lower residential service population when compared to the 231 new residents generated by the Project.[24] Alternative 3 would not generate any new employees on-site. As discussed in Section IV.H.2, Public Services—Police Protection, of this Draft EIR, the LAPD considers the residential population within their service area to evaluate service capacity. As such, while Alternative 3 would increase the existing police service population of the West Los Angeles Area compared to existing conditions, the increase would be less than for the Project due to the lower residential service population. Alternative 3 would implement similar design features as the Project. Pursuant to Project Design Feature POL-PDF-2 through Project Design Feature POL-PDF-5, this alternative would be required to provide a closed-circuit security camera system; keycard entry for the buildings and parking areas; and appropriate lighting to ensure security. The design features would help offset the increase in demand for police protection services generated by Alternative 3. Thus, as with the Project, Alternative 3 would not result in the need for new or physically altered police protection facilities, the construction of which would cause significant environmental impacts, in order to maintain service. As such, the impact on police protection services under Alternative 3 would be less than significant, and less than the less-than-significant impacts of the Project.

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[23] *Gibson Transportation Consulting, Inc., "Transportation Analysis of Project Alternatives to the Senior Residential Community at the Bellwood Los Angeles, California," May 11, 2021. See Appendix H.3 of this Draft EIR.*

[24] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H.1.*

i. Transportation

As discussed above, Alternative 3 would be developed within the same Project Site as the Project, though the portion of Bellwood Avenue that bisects the Project Site would remain in its existing alignment. Consistent with the Project, Alternative 3 would be designed to generally conform with the applicable programs, plans, ordinances, or policies regarding the circulation system including those set forth in the Mobility Plan; Citywide Design Guideline 2; Plan for a Healthy Los Angeles; and the LAMC. Additionally, Alternative 3 would not preclude the City from implementing future improvements to serve the long-term mobility needs of the City. Furthermore, as discussed further below, impacts with respect to VMT would be less than significant, similar to the Project. Therefore, impacts associated with a potential conflict with a program, plan, ordinance, or policy addressing the circulation system would be similar to the Project's less than significant impacts.

When accounting for the same project design features as the Project, Alternative 3 would result in a lower daily VMT when compared to the Project. Specifically, as shown in Appendix H of this Draft EIR, Alternative 3 would result in net reduction of 890 total daily VMT, which would be comparatively less than the 39 net daily VMT generated by the Project.[25] Similar to the Project, Alternative 3 would not meet the 250 daily screening criteria for further VMT analysis as identified in LADOT's *Transportation Assessment Guidelines*.[26] Therefore, no impacts with respect to conflicts with CEQA Guidelines Section 15064.3, subdivision (b) regarding VMT would occur and impacts would be similar to the impacts of the Project.

Alternative 3 would reduce the number of driveways compared to existing conditions. Specifically, access to the Project Site would be provided via four driveways along Bellwood Avenue. Similar to the Project, driveways under Alternative 3 would be designed, placed, and configured in accordance with LADOT's *Manual of Policies and Procedures* to limit vehicle queue and bicycle/pedestrian-vehicle conflicts. In addition, the driveways would be designed and located at a distance from Olympic Boulevard to limit queue spillovers into the public ROW and reduce interruptions to pedestrian/bicycle flow and safety. Therefore, similar to the Project, access impacts would be less than significant. Lastly, similar to the Project, construction activities under Alternative 3 could potentially

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[25] *Gibson Transportation Consulting, Inc., "Transportation Analysis of Project Alternatives to the Senior Residential Community at the Bellwood Los Angeles, California," May 11, 2021. See Appendix H.3 of this Draft EIR.*

[26] *Gibson Transportation Consulting, Inc., "Transportation Analysis of Project Alternatives to the Senior Residential Community at the Bellwood Los Angeles, California," May 11, 2021. See Appendix H.3 of this Draft EIR.*

impact the provision of emergency services by the LAFD and the LAPD in the vicinity of the Project Site as a result of construction impacts to the surrounding roadways. Although Alternative 3 would not involve the vacation and realignment of Bellwood Avenue as proposed under the Project, Alternative 3 may require infrastructure improvements or upgrades that could temporarily necessitate lane closures on nearby roadways. However, Alternative 3 would also be required to implement Project Design Feature TR-PDF-1 which would require a Construction Management Plan to be implemented to ensure that adequate and safe access remains available within and near the Project Site during construction activities. Appropriate construction traffic control measures (e.g., detour signage, delineators, etc.) would also be implemented, as necessary, to ensure emergency access to the Project Site and to ensure traffic flow is maintained on adjacent right-of-ways, as well as on the City-designated disaster route along Olympic Boulevard. With regard to operation, all driveways and internal circulation would be designed to meet all applicable City Building Code and Fire Code requirements regarding emergency access, and would not include the installation of barriers that could impede emergency vehicle access. Lastly, pursuant to California Vehicle Code Section 21806, the drivers of emergency vehicles are generally able to avoid traffic in the event of an emergency by using sirens to clear a path of travel or by driving in the lanes of opposing traffic. Therefore, Alternative 3 would result in less than significant emergency access impacts that would be similar to the less than significant impacts of the Project.

j. Tribal Cultural Resources

As previously discussed, the subterranean parking levels under Alternative 3 would extend to a maximum depth of 12 feet (a reduction in the depth of grading of approximately 18 feet with an overall reduction in grading when compared to the Project). As such, Alternative 3 would construct fewer subterranean parking levels compared to the Project and would result in reduced excavation activities. Therefore, the potential for Alternative 3 to uncover subsurface tribal cultural resources would be reduced compared to that of the Project. As discussed in Section IV.J, Tribal Cultural Resources, of this Draft EIR, no known tribal cultural resources have been identified within the Project Site or within 0.5-mile of the Project Site. Nonetheless, Alternative 3 would also implement the City's standard condition of approval to address inadvertent discovery of tribal cultural resources. As such, like the Project, impacts to tribal cultural resources would be less than significant and less than the impacts associated with the Project due to the reduction in grading activities.

k. Utilities and Service Systems

(1) Water Supply and Infrastructure

(a) Construction

Similar to the Project, construction activities associated with Alternative 3 would generate a short-term demand for water. This demand would only be slightly reduced with the reduction in construction activities and duration. As evaluated in Section IV.K.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR, the Project's temporary and intermittent demand for water during construction could be met by the City's available supplies during each year of construction. Since the water demand for construction activities associated with Alternative 3 would be reduced, the temporary and intermittent demand for water during construction of Alternative 3 would similarly be expected to be met by the City's available water supplies.

As with the Project, Alternative 3 may require the upgrade of water lines that serve the Project Site as well as construction of new on-site water distribution lines to serve the new buildings and uses. Similar to the Project, the installation of water distribution lines would primarily involve trenching to place the lines below the surface. As with the Project, prior to ground disturbance, Project contractors would coordinate with LADWP to identify the locations and depths of all lines and to avoid existing water lines and disruption of water service. Furthermore, LADWP would be notified in advance of proposed ground disturbance activities to avoid disruption of water service. LADWP would review and approve all appropriate connection requirements, pipe depths, and connection location(s). In addition, given that construction activities could temporarily affect access in adjacent rights-of-way, a Construction Management Plan, similar to the Project, would also be implemented as part of the Senior Residential Alternative to ensure adequate and safe access remains available within and near the Project Site during construction. Therefore, impacts on water supply and infrastructure associated with construction activities would be less than significant under Alternative 3, and similar to the less-than-significant impacts of the Project.

(b) Operation

Based on the reduction in total development and residential units as compared to the Project, water demand for Alternative 3 would be less than the Project's estimated increase in water demand. Thus, as with the Project, the estimated water demand under Alternative 3 would not exceed the available supplies projected to be available by LADWP. Specifically, the estimated water demand under Alternative 3 would also be within the available and projected water supplies for normal, single-dry, and multi-dry years through the year 2040. In addition, the existing off-site water distribution infrastructure would be adequate to serve Alternative 3 since the water demand would be less than the water

demand generated by the Project. Furthermore, similar to the Project, the Senior Residential Alternative would construct the necessary on-site water infrastructure and off-site connections to the LADWP water system pursuant to applicable City requirements to accommodate the new buildings. Thus, impacts to water supply under Alternative 3 would be less than significant, and less than the less-than-significant impacts of the Project.

(2) Wastewater

(a) Construction

As with the Project, wastewater generation during construction of Alternative 3 would be temporary and nominal when compared with the Project Site wastewater generation under existing conditions. Furthermore, construction workers would typically utilize portable restrooms and hand wash areas, which would not contribute to wastewater flows to the City's wastewater system. Thus, wastewater generation from construction activities under Alternative 3 is not anticipated to cause a measurable increase in wastewater flows.

As with the Project, Alternative 3 may require the construction of on-site wastewater infrastructure to serve the new buildings, and potential limited extension/upgrade and/or relocation of existing adjacent public wastewater infrastructure. Similar to the Project, these construction activities would primarily be confined to trenching and would be limited to the on-site wastewater distribution system as well as minor off-site work associated with connections to the public main. In addition, given that construction activities could temporarily affect access in adjacent rights-of-way, a Construction Management Plan, similar to the Project, would also be implemented as part of the Senior Residential Alternative to ensure adequate and safe access remains available within and near the Project Site during construction. Therefore, similar to the Project, construction-related impacts to the wastewater system under Alternative 3 would be less than significant and similar to the less-than-significant impacts of the Project.

(b) Operation

As with the Project, operation of Alternative 3 would generate greater wastewater flows relative to existing conditions. However, based on the reduction in total development and residential units as compared to the Project, wastewater generation under the Senior Residential Alternative would be less than the Project's estimated wastewater flow. As provided in Section IV.K.2, Utilities and Service Systems—Wastewater, of this Draft EIR, the Project-generated wastewater could be accommodated by the existing capacity of the HWRP. Therefore, it is anticipated that the wastewater generated by Alternative 3 could also be accommodated by the existing capacity of the HWRP, and impacts with respect to treatment capacity would be less than significant.

Similar to the Project, sewer service for Alternative 3 would be provided utilizing new on-site sewer connections to the existing sewer lines adjacent to the Project Site. Given that the wastewater flows generated by Alternative 3 would be less than the estimated wastewater flows of the Project, it is anticipated that there would be sufficient capacity within the sewer lines serving the Project Site to serve the wastewater flows of Alternative 3. Furthermore, all related sanitary sewer connections and on-site infrastructure under Alternative 3 would be designed and constructed in accordance with applicable standards.

Based on the above, impacts with regard to wastewater generation and infrastructure capacity under Alternative 3 would be less than significant, and less than the less than significant impacts of the Project.

(3) Energy Infrastructure

(a) Construction

The energy consumed by Alternative 3 would be reduced compared to the Project due to the reduced construction activities and duration. As LADWP has confirmed that the supply and existing infrastructure in the Project area would have the capacity to serve the Project Site, the existing infrastructure would similarly have capacity to supply energy for Alternative 3. Therefore, impacts on infrastructure capacity associated with short-term construction activities under Alternative 3 would be less than significant and less than the less-than-significant impacts of the Project due to the reduced construction activities.

(b) Operation

As with the Project, operation of Alternative 3 would generate an increased consumption of electricity and natural gas relative to existing conditions. However, based on the uses and amount of total floor area and number of residential units proposed under Alternative 3, the total energy consumption of Alternative 3 would be less than the total energy consumption of the Project. Therefore, impacts to infrastructure capacity under Alternative 3 would be less than significant, and less than the less-than-significant impacts of the Project.

3. Comparison of Impacts

As evaluated above, Alternative 3 would not eliminate the Project's significant and unavoidable impacts related to on-site noise during construction and to on-site and off-site vibration during construction (pursuant to the threshold for human annoyance). Cumulative impacts with respect to on-site and off-site noise during construction and with respect to vibration impacts associated with off-site vibration during construction (pursuant to the significance threshold for human annoyance) would also remain significant and

unavoidable. Alternative 3 would reduce several of the less than significant impacts associated with the Project (e.g., the less than significant impacts associated with operational air quality emissions and greenhouse gases, traffic noise, TACs during construction, energy efficiency during construction, tribal cultural resources, police and fire protection services, water and wastewater during operation and energy infrastructure). All other impacts would be similar to those of the Project.

4. Relationship of the Alternative to Project Objectives

Alternative 3 would construct 130 new senior residential units. Like the Project, the new residential units under Alternative 3 would be designated senior housing units; however, Alternative 3 would not be an eldercare facility and would not include integrated care and services. As such, Alternative 3 would partially meet the Project's underlying purpose to provide a senior residential housing community that meets the needs of an increasingly aging population in the City by providing variety in housing together with integrated services. Alternative 3 would partially meet the following objectives:

- Promote adequate housing that is accessible to senior citizens by providing a new senior-only housing residential community that meets the daily living needs of the City's aging adult population, including recreational and social needs on-site, advancing the West Los Angeles Community Plan Objective 1-4 and supporting General Plan (Housing Element) Objective 1.1 to provide housing to meet current and projected needs.

- Develop senior-independent units, assisted living guest rooms, and memory care guest rooms to help meet the specific housing needs of the City's aging population, consistent with General Plan (Housing Element) Objective 1.1, and Policy 1.1.3, and West Los Angeles Community Plan Objective 1-1 to construct a range of different housing types that address the diverse needs of the City's existing residents and projected population.

- Locate senior citizen housing within reasonable walking distance of health and community facilities, services and public transportation by integrating supporting services with the senior housing units in one building, supporting the West Los Angeles Community Plan Policy 1-2.2.

- Provide a range of on-site recreational, health, wellness and dining activities and services to support the daily needs of seniors and promote safety and health consistent with General Plan (Housing Element) Objective 2.1.

- Alternative 3 would not meet the following basic Project objective as Alternative 3 would not involve the vacation and realignment of Bellwood Avenue as proposed under the Project:

- Unify the Project Site to maximize efficient use of the site and associated parcels and orient development to and respond to the low- to mid-scale character of surrounding land uses while maintaining adequate public circulation.

D. Environmentally Superior Alternative

Section 15126.6(e)(2) of the CEQA Guidelines indicates that an analysis of alternatives to a project shall identify an Environmentally Superior Alternative among the alternatives evaluated in an EIR. The CEQA Guidelines also state that should it be determined that the No Project Alternative is the Environmentally Superior Alternative, the EIR shall identify another Environmentally Superior Alternative among the remaining alternatives.

With respect to identifying an Environmentally Superior Alternative among those analyzed in this Draft EIR, the range of feasible alternatives includes the No Project/No Build Alternative; the Commercial/Residential Alternative; and the Senior Residential Alternative. Table V-1 on page V-8 provides a comparative summary of the environmental impacts anticipated under each alternative with the environmental impacts associated with the Project. A more detailed description of the potential impacts associated with each alternative is provided above. Pursuant to Section 15126.6(c) of the CEQA Guidelines, the analysis below addresses the ability of the alternatives to "avoid or substantially lessen one or more of the significant effects" of the Project.

Of the alternatives analyzed in this Draft EIR, Alternative 1, the No Project/No Build Alternative would avoid all of the Project's significant environmental impacts, including the Project's significant and unavoidable impacts related to on- and off-site construction noise impacts and on- and off-site construction vibration impacts with respect to human annoyance. Alternative 1 would also avoid the Project's significant and unavoidable cumulative impacts related to on- construction noise impacts, as well as the Project's cumulative off-site construction vibration impacts related to human annoyance. Alternative 1 would also further reduce most of the Project's remaining less-than-significant impacts as no changes to the existing conditions would occur. However, without updating the existing older and more energy consuming buildings, Alternative 1 would result in a greater impact associated with energy efficiency compared to the Project, although this impact would remain less than significant.

In accordance with the CEQA Guidelines requirement to identify an Environmentally Superior Alternative other than the No Project Alternative, a comparative evaluation of the remaining alternatives indicates that Alternative 3, the Senior Residential Alternative, would be the Environmentally Superior Alternative amongst the remaining alternatives. As discussed above, while Alternative 3 would not substantially reduce or eliminate the

significant and unavoidable impacts of the Project associated with noise and vibration during construction, Alternative 3 would reduce several of the less than significant impacts associated with the Project (e.g., the less than significant impacts associated with operational air quality emissions and greenhouse gases, traffic noise, TACs during construction, energy efficiency during construction, tribal cultural resources, police and fire protection services, water and wastewater during operation, and energy infrastructure). However, as discussed above, Alternative 3 would only partially meet the underlying purpose of the Project and the Project objectives.

VI. Other CEQA Considerations

VI. Other CEQA Considerations

1. Significant Unavoidable Impacts

CEQA Guidelines Section 15126.2(b) requires that an EIR describe any significant impacts which cannot be avoided. Specifically, Section 15126.2(b) states:

> *Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.*

As evaluated in Section IV, Environmental Impact Analysis, of this Draft EIR, and summarized below, implementation of the Project would result in significant impacts that cannot be feasibly mitigated with regard to on-site noise during construction and on- and off-site vibration during construction (pursuant to the threshold for human annoyance). Implementation of the Project would result in significant cumulative impacts that cannot be feasibly mitigated with regard to on- and off-site noise during construction and vibration impacts associated with off-site construction (pursuant to the significance threshold for human annoyance).

a. On-Site Construction Noise

As discussed in Section IV.F, Noise, of this Draft EIR, implementation of Mitigation Measure NOI-MM-1 provided therein would reduce the Project's construction noise levels to the extent feasible. Specifically, implementation of Mitigation Measure NOI-MM-1 (installation of temporary sound barrier) would reduce the noise generated by on-site construction activities at the off-site sensitive uses at the ground level by a minimum 15 dBA at the residential uses along Keswick Avenue and Orton Avenue (receptor location R1), 15 dBA at the Courtyard by Marriott and Century Park hotels adjacent to the Project Site to the east and north, respectively (receptor location R2), by a minimum 9 dBA at the residential uses on Lauriston Avenue (receptor location R3), 5 dBA at the residential uses at the northwest corner of Olympic Boulevard and Kerwood Avenue (receptor location R4), by a minimum 7 dBA at the residential uses on Kerwood Avenue (receptor location R5), and 15 dBA at the ground level of the residential uses on Kerwood Avenue (receptor

location R6).[1] The estimated construction-related noise levels at off-site sensitive receptor locations R3, R4, and R5 would be reduced to below a level of significance with implementation of Mitigation Measure NOI-MM-1. However, the estimated construction-related noise levels would still exceed the significance thresholds at receptor locations R1, R2 and R6. There are no other feasible mitigation measures that could be implemented to reduce the temporary noise impacts from on-site construction at receptor locations R1, R2, and R6. Therefore, construction noise impacts associated with on-site noise sources would remain significant and unavoidable and the Project's contribution would be cumulatively considerable.

b. Off-Site Construction Noise

As discussed in Section IV.F, Noise, of this Draft EIR, Project-level off-site construction noise impacts would be less than significant; however, cumulative noise impacts from off-site construction could be significant if construction haul trucks for the related projects and the Project were to utilize the same haul routes. As discussed in Section IV.F, Noise, of this Draft EIR, it is estimated that up to 37 truck trips per hour could occur along Pico Boulevard without exceeding the significance criteria of 5 dBA increase over the ambient noise levels. Therefore, if the total number of trucks from the Project and related projects were to add up to 38 truck trips per hour along Pico Boulevard, the estimated noise level from 38 truck trips per hour plus the ambient would be 70.8 dBA, which would increase the ambient noise levels by 5 dBA and exceed the significance criteria.[2] Since the Project would generate up to 13 truck trips per hour, an additional 25 truck trips from the Related Project No. 6 would increase the ambient noise level by 5 dBA or more along Pico Boulevard and Olympic Boulevard. Similarly, it is estimated that if the Project and related projects were to add up to 29 and 44 construction-related truck trips per hour along La Cienega Boulevard and Olympic Boulevard, respectively, the estimated cumulative noise would increase the ambient by 5 dBA and significance criteria. Therefore, cumulative noise due to construction truck traffic from the Project and other related projects has the potential to increase the ambient noise levels along the truck route by 5 dBA, if construction haul trucks for the related projects and the Project were to utilize the same haul routes at the same time and generate the number of trips identified above. Given these uncertainties, it is not known whether these impacts would actually occur. Conventional mitigation measures, such as providing noise barrier walls to reduce the off-site traffic noise impacts, would not be feasible as the barriers would obstruct the access and visibility to the properties along the affected roadways. There are no other

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[1] *15 dBA is the typical maximum noise reduction provided by temporary construction noise barrier.*

[2] *It is estimated that with 38 truck trips, the noise level along Pico Boulevard would be 69.1 dBA, when added to the existing ambient of 65.8 dBA the cumulative noise levels would be 70.8 dBA, which would exceed the ambient by 5.0 dBA.*

feasible mitigation measures to reduce the potential significant impacts associated with the cumulative off-site construction noise. Therefore, potential impacts associated with the cumulative off-site construction noise would remain significant and unavoidable and the Project's contribution would be cumulatively considerable.

c. On-Site Construction Vibration (Human Annoyance)

As discussed in Section IV.F, Noise, of this Draft EIR, the estimated ground-borne vibration levels at receptor locations R1, R2 and R6 without mitigation would exceed the 72-VdB significance criteria during the demolition and grading/excavation phases with large construction equipment (i.e., large bulldozer, caisson drilling and loaded trucks) operating within 80 feet of receptor locations R1, R2, and R6. As discussed in Section IV.F, Noise, of this Draft EIR, conventional mitigation measures, such as providing a wave barrier, were considered. However, as wave barriers must be very deep and long to be effective, they are cost prohibitive for temporary applications such as construction, and therefore are considered infeasible. In addition, constructing a wave barrier to reduce the Project's construction-related vibration impacts would, in and of itself, generate ground-borne vibration from the excavation equipment. As such, there are no feasible mitigation measures that could be implemented to reduce the temporary vibration impacts from on-site construction associated with human annoyance to a less-than-significant level. Therefore, Project-level vibration impacts from on-site construction activities with respect to human annoyance would be significant and unavoidable.

d. Off-Site Construction Vibration (Human Annoyance)

As discussed in Section IV.F, Noise, of this Draft EIR, the temporary vibration levels could reach approximately 75 VdB and 61 VdB periodically as trucks pass sensitive receptors along Olympic Boulevard at 20 feet and 60 feet, respectively. The residential and hotel uses along Olympic Boulevard would be exposed to ground-borne vibration levels up to 75 VdB, which would exceed the 72-VdB significance criteria from the construction trucks. The estimated ground-borne vibration at the Fox Studios (studios facing Olympic Boulevard) of 61 VdB would be below the 65-VdB significance threshold for studio uses. Vibration sensitive uses along Century Park East include residential uses, which are located approximately 30 feet from the roadway, which would be exposed to ground-borne vibration of 70 VdB and would be below the 72-VdB significance threshold. Vibration sensitive uses along Pico Boulevard include school and studio (Fox Studios) uses, which are located approximately 25 feet and 80 feet, respectively. The estimated ground-borne vibration from construction trucks would be 72 VdB (at the school use) and 57 VdB (at the studio uses), which would be below the 75-VdB and 65-VdB significance thresholds, respectively. There are residential and motel uses located approximately 25 feet along Overland Avenue and La Cienega Boulevard, respectively. The estimated ground-borne vibration at these sensitive uses would 72 VdB, which would be at the

72-VdB significance criteria. In addition, as discussed above, the temporary vibration levels from construction trucks passing residential and hotel uses along Olympic Boulevard could exceed the significance criteria. As discussed above, mitigation measures considered to reduce vibration impacts from off-site construction activities with respect to human annoyance included the installation of a wave barrier. However, as discussed above, wave barriers must be very deep and long to be effective and are not considered cost effective for temporary applications, such as construction. Further, construction of the wave barriers themselves would generate ground borne vibrations. In addition, it would not be feasible to install a wave barrier along the public roadways for the off-site construction vibration impacts. Therefore, potential impacts associated with the cumulative off-site traffic noise would remain significant and unavoidable and the Project's contribution would be cumulatively considerable.

2. Reasons Why the Project is Being Proposed, Notwithstanding Significant Unavoidable Impacts

In addition to identification of a project's significant unavoidable impacts, CEQA Guidelines Section 15126.2(b) requires that an EIR describe the reasons why a project is being proposed, notwithstanding the effects of the identified significant and unavoidable impacts. The reasons why the Project has been proposed are grounded in a comprehensive list of project objectives included in Section II, Project Description, of this Draft EIR.

As discussed in Section II, Project Description, of this Draft EIR, underlying purpose of the Project is to provide a senior residential housing community that meets the needs of an increasingly aging population in the City by providing variety in housing together with integrated services. The underlying purpose and objectives of the Project are closely tied to the goals and objectives of the West Los Angeles Community Plan, which supports the objectives and policies of applicable larger-scale regional and local land use plans, including SCAG's Regional Transportation Plan/Sustainability Communities Strategy (RTP/SCS), and the City's General Plan.

As discussed in Section IV.E, Land Use and Planning, of this Draft EIR, the Project would not conflict with these applicable goals set forth in the RTP/SCS adopted for the purpose of avoiding or mitigating an environmental effect. Specifically, the Project would increase density on an already developed urban infill site in a City-designated TPA and SCAG-designated High-Quality Transit Area in close proximity to shopping, services and transit, and served by an established network of roads and freeways. Furthermore, the Project would provide: (1) bicycle parking spaces meeting LAMC requirements that would serve to promote use of bicycles; (2) enhanced sidewalks with new street trees and other improvements along the Project Site's Bellwood Avenue frontage; (3) electric vehicle

charging stations; (4) shuttle service for the Project's residents; and (5) a range of senior housing unit types to assist in addressing the demand for senior housing in the City, with a variety of on-site amenities on-site and connectivity to local services.

The Project would also develop a sustainable building which minimizes adverse effects on the environment and minimizes the use of non-renewable resources by complying with Title 24 energy conservation requirements and incorporating the environmentally sustainable building features and construction protocols required by the Los Angeles Green Building Code and CALGreen. Furthermore, the Project would represent smart growth and sustainable development by intensifying density on an urban infill site in proximity to transit, providing shuttle service for the Project's residents, and providing charging stations for electric vehicles. Overall, as evaluated in Section IV.C, Energy, of this Draft EIR, the Project would not result in the wasteful or inefficient use of energy, and impacts would be less than significant.

With regard to the City's General Plan, the Project would be consistent with the policies set forth in the City's General Plan Framework Element. In particular, the Project would: (1) provide for the spatial distribution of development that promotes an improved quality of life by facilitating a reduction of vehicle trips, vehicle miles traveled (VMT) and air pollution through development of on an urban infill site served by existing infrastructure in a TPA within close proximity to shopping, services and transit, and providing pedestrian improvements such as pedestrian pathways and courtyards throughout the Project Site; (2) provide for the development of streetscape improvements by providing widened sidewalks, new street trees and other streetscape improvements along portions of Bellwood Avenue, and providing a pedestrian path within the Project Site; and (3) design multi-family residential development to minimize traffic and noise and that incorporates recreational and open space amenities for Project residents by proposing development that would result in less than significant transportation impacts and reduced VMT; locating parking, service, trash, laundry and kitchen facilities within the proposed building to minimize operational noise; and includes 14,630 square feet of open space (e.g., courtyards, outdoor bistros, landscaped terraces, walkways, etc.), which is in excess of 7,800 square feet of open space required by the LAMC.

Also, in support of the Framework Element, the Project would support the City's objective to plan the capacity for and develop incentives to encourage production of housing units of various types to meet the projected housing needs by income level of the future population by providing a project that would include 192 much needed senior housing residential units. Additionally, the Project would encourage proper design and effective use of the built environment to help increase personal safety and utilize development standards to promote development of open space that is as safe as possible by incorporating a range of security features including, but not limited to, private on-site security personnel, a closed circuit security camera system, restricted access, security

lighting, and maximizing visibility and minimizing areas of concealment. Furthermore, The Project would implement Best Management Practices (BMPs) and erosion control measures under the required Stormwater Pollution Prevention Plan (SWPPP) to minimize the potential for pollutants and sediment in stormwater runoff from the Project Site during the construction period and would implement the required Standard Urban Stormwater Mitigation Plan to do the same during operation. With implementation of the proposed infrastructure upgrades, including the upsizing of the water line along Bellwood Avenue, water supply, storage facilities and delivery systems would be adequate to serve the Project. In addition, the Project would comply with the City's Low Impact Development (LID) requirements and would thus improve water quality and provide adequate drainage throughout the Project Site.

Furthermore, the Project would be consistent with the applicable goals, objectives, and policies set forth in the West Los Angeles Community Plan. Specifically, by providing 192 senior housing residential units, the Project would provide for the development of new housing, promote housing accessible to more segments of the population including seniors, provide for adequate multi-family housing, promote greater individual choice in housing, and promote neighborhood preservation and preserve and enhance residential character. There is a growing need for eldercare facilities in Los Angeles because approximately 10 percent of the City's population is aged 65 years and older,[3] and the age distribution is expected to shift, and almost triple by 2035 in the greater Los Angeles area.[4] The Project would help meet this need and would result in a net increase in residential units on the Project Site. As discussed above, the Project would also reduce vehicle trips and congestion by developing new housing in proximity to adequate services and facilities and locating higher residential densities near commercial centers and major bus routes by increasing urban density on an urban infill site in a TPA within proximity to major commercial corridors, services and transit, reducing VMT. Although the Project would displace 112 multi-family housing units on the Project Site and the associated residents of those units, the Project would replace this housing with 192 eldercare housing units and would result in a net increase of 80 residential units (192 proposed units—112 existing units to be removed). In addition, the Applicant would comply with applicable requirements of the RSO and Ellis Act related to relocation.

Based on the above, the Project reflects a development that is consistent with the overall vision of the City and SCAG to locate supporting and synergistic uses within one site to create sustainable communities and enhance quality of life throughout the City and the region. As such, the benefits of the Project, as outlined above, would outweigh the

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[3] *According to United States Census 2010 data presented in the General Plan Housing Element.*

[4] *Chart 1.2 "Change in Age Distribution: Past and Projected, 2000-2010 &2010-2035" from Housing Element, page 1-5.*

effects of the significant and unavoidable impacts of the Project, which are all associated with short-term construction activities. Furthermore, as detailed in Section V, Alternatives, of this Draft EIR, no feasible alternative was identified that would eliminate all of the Project's significant and unavoidable impacts.

3. Significant Irreversible Environmental Changes

CEQA Guidelines Section 15126.2(c) indicates that an EIR should evaluate significant irreversible environmental changes that would be caused by implementation of a proposed project. As stated in CEQA Guidelines Section 15126.2(c), "[u]ses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified."

The Project would necessarily consume a limited amount of slowly renewable and non-renewable resources that could result in irreversible environmental changes. This consumption would occur during construction of the Project and would continue throughout its operational lifetime. The development of the Project would require a commitment of resources that would include: (1) building materials and associated solid waste disposal effects on landfills; (2) water; and (3) energy resources (e.g., fossil fuels) for electricity, natural gas, and transportation. As demonstrated below, the Project would not consume a large commitment of natural resources or result in significant irreversible environmental changes.

a. Building Materials and Solid Waste

Construction of the Project would require consumption of resources that do not replenish themselves or which may renew so slowly as to be considered non-renewable. These resources would include certain types of lumber and other forest products, aggregate materials used in concrete and asphalt (e.g., sand, gravel and stone), metals (e.g., steel, copper and lead), and petrochemical construction materials (e.g., plastics).

The Project's potential impacts related to solid waste are addressed in the Initial Study prepared for the Project, which is included as Appendix A to this Draft EIR. As discussed therein, during construction of the Project, a minimum of 75 percent of construction and demolition debris would be diverted from landfills. In addition, during operation, the Project would provide on-site recycling containers within a designated

recycling area for Project residents to facilitate recycling in accordance with the City of Los Angeles Space Allocation Ordinance (Ordinance No. 171,687) and the Los Angeles Green Building Code. In accordance with Assembly Bill (AB) 1826, the Project would also provide for the recycling of organic waste. The Project would adhere to State and local solid waste policies and objectives that further goals to divert waste. Thus, the consumption of non-renewable building materials such as aggregate materials and plastics would be reduced.

b. Water

Consumption of water during construction and operation of the Project is addressed in Section IV.K.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR. As evaluated therein, given the temporary nature of construction activities, the short-term and intermittent water use during construction of the Project would be less than the net new water consumption estimated for the Project at buildout. As discussed in Section IV.K.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR, the Project would require the existing 4-inch line in Bellwood Avenue to be decommissioned, removed, and replaced with two new distinct water main extensions, including approximately 250 feet of new 8-inch line to be installed in the easterly half of Bellwood Avenue and approximately 213 feet of new 8-inch line to be installed in the westerly drive aisle of Bellwood Avenue. These two new 8-inch main lines would tie into the existing 12-inch main in Olympic Boulevard. These upgrades identified by LADWP would ensure adequate water capacity is provided for the Project. In addition, LADWP would be able to meet the water demand of the Project, as well as the existing and planned future water demands of its service area. Thus, as evaluated in Section IV.K.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR, while Project construction and operation would result in some irreversible consumption of water, the Project would not result in a significant impact related to water supply.

c. Energy Consumption

During ongoing operation of the Project, non-renewable fossil fuels would represent the primary energy source, and thus the existing finite supplies of these resources would be incrementally reduced. Fossil fuels, such as diesel, gasoline, and oil, would also be consumed in the use of construction vehicles and equipment. Project consumption of non-renewable fossil fuels for energy use during construction and operation of the Project is addressed in Section IV.C, Energy, of this Draft EIR. As discussed therein, construction activities for the Project would not require the consumption of natural gas but would require the use of fossil fuels and electricity. On- and off-road vehicles would consume an estimated 33,541 gallons of gasoline and approximately 153,345 gallons of diesel fuel throughout the Project's construction. For comparison purposes, the fuel usage during Project construction would represent approximately 0.001 percent of the 2021 annual

on-road gasoline-related energy consumption and 0.01 percent of the 2021 annual diesel fuel–related energy consumption in Los Angeles County.[5] Furthermore, as detailed in Section IV.C, Energy, of this Draft EIR, a total of approximately 17,268 kWh of electricity is anticipated to be consumed during Project construction. The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed and would cease upon completion of construction. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. In addition, long-term building construction lighting (longer than 120 days) is subject to Title 24 requirements which includes limits on the lighting wattage, which would result in the conservation of energy.[6] Furthermore, trucks and equipment used during construction activities would comply with CARB's anti-idling regulations as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Additionally, on-road vehicles (i.e., haul trucks, worker vehicles) would be subject to federal fuel efficiency requirements. Therefore, the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy resources. Thus, impacts related to the consumption of fossil fuels during construction of the Project would be less than significant.

During operation, the Project's increase in electricity and natural gas demand would be within the anticipated service capabilities of LADWP and the Southern California Gas Company (SoCalGas), respectively. Specifically, the Project's electricity demand would represent less than 0.004 percent of LADWP projected sales in 2023. Additionally, the Project's natural gas demand would represent 0.00006 percent of the 2023 forecasted consumption in SoCalGas' planning area. As discussed in Section IV.C, Energy, of this Draft EIR, the Project would comply with 2019 Title 24 standards and applicable 2019 CALGreen requirements. In addition, the Applicant would also implement GHG-PDF-1 in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, which states that the design of new buildings would incorporate sustainability features (e.g., Energy Star–labeled products) and incorporate water conservation features, such as drip/subsurface irrigation. Also, under GHG-PDF-1, the Project would use LED lighting, which would reduce electricity used for lighting purposes compared to non-LED lighting. These measures would reduce the Project's energy demand in comparison to the Project without reduction features. Gasoline and diesel fuel consumption during operation are estimated to result in a net increase of 229 gallons of gasoline and 42 gallons of diesel per year, or a total of 271 gallons of petroleum-based fuels annually, respectively, which would represent a small percentage of gasoline and diesel fuel consumption in Los Angeles County. In addition, as noted in Section IV.E, Land Use and Planning, of this Draft EIR, VMT would be reduced by intensifying urban density on an urban infill site in close proximity to shopping, services, and transit; providing on-site pedestrian facilities and sidewalk improvements along its

[5] *Refer to Appendix D of this Draft EIR for detailed energy calculations.*

[6] *California Building Energy Efficiency Standards, Title 24, Part 6, §110.9, §130.0, and §130.2.*

Bellwood Avenue frontage; providing on-site bicycle parking; and providing shuttle service for the Project's senior residents.

Therefore, based on the above, the Project would not cause the wasteful, inefficient, and unnecessary consumption of energy and would be consistent with the intent of Appendix F to the CEQA Guidelines. In addition, Project operations would not conflict with adopted energy conservation plans. Refer to Section IV.C, Energy, of this Draft EIR, for further analysis regarding the Project's consumption of energy resources.

d. Environmental Hazards

The Project's potential use of hazardous materials is addressed in the Initial Study for the Project, included as Appendix A to this Draft EIR. As evaluated therein, the types and amounts of hazardous materials that would be used in connection with the Project would be typical of those used in an eldercare facility. Specifically, operation of the Project would be expected to involve the use and storage of small quantities of potentially hazardous materials in the form of cleaning solvents, paints, and those used in maintenance landscaping. Operation of the Project could also involve the routine use of biohazards waste and cleaning agents. Construction of the Project would also involve the temporary use of potentially hazardous materials, including fuel and oils associated with construction equipment, as well as coatings, paints, adhesives, and caustic or acidic cleaners. However, all potentially hazardous materials would be used and stored in accordance with manufacturers' instructions and handled in compliance with applicable federal, state, and local requirements. Any associated risk would be reduced to a less than significant level through compliance with these standards and regulations. As such, compliance with regulations and standards would serve to protect against significant and irreversible environmental change that could result from the accidental release of hazardous materials.

e. Conclusion

Based on the above, Project construction and operation would require the irreversible commitment of limited, slowly renewable, and non-renewable resources, which would limit the availability of these resources and the Project Site for future generations or for other uses. However, the consumption of such resources would not be considered substantial and would be consistent with regional and local growth forecasts and development goals for the area. The loss of such resources would not be highly accelerated when compared to existing conditions and such resources would not be used in a wasteful manner. Therefore, although irreversible environmental changes would result from the Project, such changes are concluded to be less than significant, and the limited use of nonrenewable resources that would be required by Project construction and operation is justified.

4. Growth-Inducing Impacts

CEQA Guidelines Section 15126.2(d) requires that growth-inducing impacts of a project be considered in a Draft EIR. Growth-inducing impacts are characteristics of a project that could directly or indirectly foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. According to the CEQA Guidelines, such projects include those that would remove obstacles to population growth (e.g., a major expansion of a waste water treatment plant that, for example, may allow for more construction in service areas). In addition, as set forth in the CEQA Guidelines, increases in the population may tax existing community service facilities, thus requiring construction of new facilities that could cause significant environmental effects. The CEQA Guidelines also require a discussion of the characteristics of projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Finally, the CEQA Guidelines also state that it must not be assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.

a. Population

The Project proposes 192 senior housing residential units, consisting of 46 studio memory care guest rooms, 51 one-bedroom assisted living guest rooms, 24 two-bedroom assisted living guest rooms, 43 one-bedroom independent living dwelling units, and 28 two-bedroom independent living dwelling units in an eldercare facility for persons aged 62 and older. Based on the generation rates used in the City of Los Angeles VMT Calculator, the Project would generate approximately 231 residents.[7] As discussed in Section II, Project Description, of this Draft EIR, the Project Site is currently developed with three multi-family residential developments, consisting of 112 units, and associated structures and parking. To accommodate the Project's proposed uses, all existing structures would be removed. Assuming the 112 units were each occupied by one person, the Project would result in a net increase of 119 on-site residents.[8]

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[7] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H. The VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would result in a net increase of 132 residents as compared to 119 residents.*

[8] *As noted above, the VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would result in a net increase of 132 residents as compared to 119 residents.*

According to SCAG's 2016-2040 RTP/SCS, the forecasted population for the City of Los Angeles Subregion in 2019 was approximately 4,036,475 persons.[9] In 2023, the projected occupancy year of the Project, the City of Los Angeles Subregion is anticipated to have a population of approximately 4,145,604 persons.[10] Per the 2016–2040 RTP/SCS, the estimated 231 new residents generated by the Project would represent approximately 0.21 percent of the population growth forecasted by SCAG in the City of Los Angeles Subregion between 2019 and 2023.[11]

According to SCAG's 2020–2045 RTP/SCS, the forecasted population for the City of Los Angeles Subregion in 2019 was approximately 4,020,438 persons.[12] In 2023, the City of Los Angeles Subregion is anticipated to have a population of approximately 4,135,955 persons.[13] Per the 2020–2045 RTP/SCS, the estimated 231 new residents generated by the Project would represent approximately 0.20 percent of the population growth forecasted by SCAG in the City of Los Angeles Subregion between 2019 and 2023.[14]

b. Employment

In addition to the residential population generated by the Project, the Project would have the potential to generate indirect population growth in the vicinity of the Project Site as a result of the employment opportunities generated by the Project.

During construction, the Project would create temporary construction-related jobs. However, the work requirements of most construction projects are highly specialized such

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[9] *Based on a linear interpolation of 2012–2040 data.*

[10] *Based on a linear interpolation of 2012–2040 data.*

[11] *As noted above the VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would represent approximately 0.22 percent of SCAG's projected population growth for the City of Los Angeles Subregion between 2019 and 2023 as compared to approximately 0.21 percent. As such, it would be well within SCAG's projections for the City of Los Angeles Subregion, and the conclusions of the analysis would remain the same.*

[12] *Based on a linear interpolation of 2016–2045 data.*

[13] *Based on a linear interpolation of 2016–2045 data.*

[14] *As noted above the VMT Calculator assumption of 231 Project residents is more conservative in evaluating VMT per capita; however, if full occupancy of the Project is assumed with one person per bedroom, the Project could generate up to 244 residents, which would represent approximately 0.21 percent of SCAG's projected population growth for the City of Los Angeles Subregion between 2019 and 2023 as compared to approximately 0.20 percent. As such, it would be well within SCAG's projections for the City of Los Angeles Subregion, and the conclusions of the analysis would remain the same.*

that construction workers remain at a job site only for the time in which their specific skills are needed to complete a particular phase of the construction process. Thus, construction workers would not be expected to relocate to the Project vicinity as a direct consequence of working on the Project. Therefore, given the availability of construction workers, the Project would not be considered growth-inducing from a short-term employment perspective. Rather, the Project would provide a public benefit by providing new employment opportunities during the construction period.

Based on the generation rates used in the City of Los Angeles VMT Calculator, the Project would generate approximately 88 employees.[15] According to SCAG's 2016-2040 RTP/SCS, the employment forecast for the City of Los Angeles Subregion in 2019 was approximately 1,814,575 employees.[16] In 2023, the City of Los Angeles Subregion is anticipated to have approximately 1,882,104 employees.[17] Per the 2016–2040 RTP/SCS, the estimated 88 employees would constitute approximately 0.13 percent of the employment growth forecasted between 2019 and 2023.

According to SCAG's 2020–2045 RTP/SCS, the employment forecast for the City of Los Angeles Subregion in 2019 was approximately 1,878,052 employees.[18] In 2023, the City of Los Angeles Subregion is anticipated to have approximately 1,917,721 employees.[19] Per the 2020–2045 RTP/SCS, the estimated 88 employees would constitute approximately 0.22 percent of the employment growth forecasted between 2019 and 2023.

Accordingly, the Project's generation of residents and employees would be consistent with the population employment projections contained in the 2016–2040 and 2020–2045 RTP/SCS.

In addition, the proposed eldercare facility use would include a range of full-time and part-time positions that are typically filled by persons already residing in the vicinity of the workplace, and who generally do not relocate their households due to such employment opportunities. Therefore, given that some of the employment opportunities generated by the Project would be filled by people already residing in the vicinity of the Project Site, the potential growth associated with Project employees who may relocate their place of residence would not be substantial. Although it is possible that some of the employment opportunities offered by the Project would be filled by persons moving into the surrounding

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[15] *Refer to the VMT calculation worksheets included in the Transportation Study provided in Appendix H.*

[16] *Based on a linear interpolation of 2012–2040 data.*

[17] *Based on a linear interpolation of 2012–2040 data.*

[18] *Based on a linear interpolation of 2016–2045 data.*

[19] *Based on a linear interpolation of 2016–2045 data.*

area, which could increase demand for housing, it is anticipated that most of this demand would be filled by then-existing vacancies in the housing market and others by any new residential developments that may occur in the vicinity of the Project Site. As such, the Project's uses would be unlikely to create an indirect demand for additional housing or households in the area.

c. Utility Infrastructure Improvements

The area surrounding the Project Site is already developed with a mix of residential and commercial uses, and the Project would not remove impediments to growth. The Project does not propose any roadway improvements that would introduce new roads or expand roadway capacity. The proposed realignment of the portion of Bellwood Avenue that bisects the Project Site would replace a segment of the existing street through the Project Site to facilitate efficient development of the Project Site. With regard to water infrastructure improvements, the Project would require an existing 4-inch line to be decommissioned, removed, and replaced with two new distinct water main extensions, including approximately 250 feet of a new 8-inch line to be installed in the easterly half of Bellwood Avenue and approximately 213 feet of a new 8-inch line to be installed in the westerly drive aisle of Bellwood Avenue. These two new 8-inch main lines would tie into the existing 12-inch main in Olympic Boulevard. These upgrades identified by LADWP would ensure adequate water capacity is provided for the Project. The Project would also require the abandonment and removal of the existing 325 feet of 8-inch sewer line within Bellwood Avenue on the Project Site and adjacent on-site lateral lines as well as construction of on-site wastewater infrastructure to serve the new building, and potential limited extension/upgrade and/or relocation of existing adjacent public wastewater infrastructure. Furthermore, the Project would require local infrastructure upgrades to maintain and improve electricity and natural gas lines on-site and in the immediate vicinity of the Project Site. However, such improvements would be intended primarily to meet Project-related demand and would not necessitate regional utility infrastructure improvements that have not otherwise been accounted for and planned for on a regional level.

d. Conclusion

Overall, the Project would be consistent with the growth forecast for the City of Los Angeles Subregion and would be consistent with regional policies to reduce urban sprawl, efficiently utilize existing infrastructure, reduce regional congestion, and improve air quality through the reduction of VMT. In addition, the Project would not require any major roadway improvements nor would the Project open any large undeveloped areas for new use. Any access improvements would be limited to the realignment of the portion of Bellwood Avenue that bisects the Project Site and driveways necessary to provide immediate access

to the Project Site and to improve safety and walkability. Therefore, direct and indirect growth-inducing impacts would be less than significant.

5. Potential Secondary Effects of Mitigation Measures

CEQA Guidelines Section 15126.4(a)(1)(D) states that "if a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed." With regard to this section of the CEQA Guidelines, the potential impacts that could result with the implementation of each mitigation measure proposed for the Project was reviewed. The following provides a discussion of the potential secondary impacts that could occur as a result of the implementation of the proposed mitigation measures, listed by environmental issue area.

a. Geology and Soils

Mitigation Measure CUL-MM-1 states that a qualified paleontologist would be retained in the event paleontological materials are encountered, and grading and excavation activities in the area of the exposed material would be temporarily diverted or redirected to facilitate evaluation and, if necessary, salvage. This mitigation measure represents procedural actions and would be beneficial in protecting cultural resources that could potentially be encountered on-site. As such, implementation of this mitigation measure would not result in adverse secondary impacts.

b. Noise

Mitigation Measure NOI-MM-1 requires that prior to the start of earthmoving activities, a temporary and impermeable sound barrier shall be erected and maintained along portions of the Project Site to reduce noise levels at off-site sensitive receptors. The installation of this sound barrier would include limited construction activities associated with its installation. Any noise or other short-term impacts associated with this installation would not result in additional impacts beyond what has already been disclosed in the environmental analyses included in Chapter IV of this Draft EIR. As such, implementation of this mitigation measure would not result in adverse secondary impacts

Mitigation Measure NOI-MM-2 requires the use of large construction equipment (i.e., large bulldozer, caisson drill rig, and/or loaded trucks) be located a minimum of 13 feet away from the residences abutting the Project Site on the east side of Kerwood Avenue, 13 feet away from the commercial buildings (located at 10390 Bellwood Avenue and 10344 Olympic Boulevard) adjacent to the Project Site, and 6 feet away from the Century

Park hotel. This mitigation would not generate physical impacts on the environment, would be beneficial in reducing Project construction-related vibration impacts to the buildings adjacent to the Project Site, and would not result in adverse secondary impacts.

Mitigation Measure NOI-MM-3 requires the use of jackhammers be located a minimum of 6 feet away from the residences abutting the Project Site on the east side of Kerwood Avenue and the commercial buildings located at 10390 Bellwood Avenue and 10344 Olympic Boulevard. This mitigation would not include physical impacts on the environment, would be beneficial in reducing Project construction-related vibration impacts to the buildings adjacent to the Project Site, and would not result in adverse secondary impacts.

6. Effects Not Found to Be Significant

CEQA Guidelines Section 15128 states that an EIR shall contain a brief statement indicating reasons that various possible significant effects of a project were determined not to be significant and not discussed in detail in the EIR. An Initial Study was prepared for the Project and is included in Appendix A of this Draft EIR. The Initial Study provides a detailed discussion of the potential environmental impact areas and the reasons that each environmental area is or is not analyzed further in this Draft EIR. The City of Los Angeles determined through the Initial Study that the Project would not have the potential to cause significant impacts related to aesthetics (scenic vistas, scenic resources, and light/glare); agriculture and forestry resources; air quality (odors); biological resources; cultural resources; geology and soils; hazards and hazardous materials; hydrology and water quality; land use and planning (division of an established community); mineral resources; noise (airport or airstrip-related noise); population and housing (induced population growth); public services (schools, parks, and libraries); recreation; stormwater drainage facilities; solid waste; and wildfire. A summary of the analysis provided in Appendix A for these issue areas is provided below.

a. Aesthetics

(1) Scenic Vistas

Due to the highly urbanized and built out surroundings, publicly available scenic vistas of any valued visual resources that may exist in the vicinity of the Project Site are not available. Therefore, development of the Project would not have the potential to substantially or adversely affect a scenic vista since none currently exist and no impacts would occur.

(2) Scenic Resources Within a State Scenic Highway

The Project Site is not located along a scenic highway as designated by the State. Therefore, the Project would not substantially damage scenic resources, including trees, rock outcroppings, and historic buildings or other locally recognized desirable aesthetic natural feature within a scenic highway and no impacts would occur.

(3) Light and Glare

New sources of light that would be introduced by the Project would include exterior lighting along the public areas that would include pedestrian-scale (i.e., lower to the ground, spaced closer together) fixtures. Exterior lighting would incorporate low-level exterior lights on the building and along pathways for security and wayfinding purposes. In addition, low-level lighting to accent signage, architectural features, and landscaping elements would be incorporated throughout the Project Site. Project lighting would be designed to minimize light trespass from the Project Site and would comply with all LAMC requirements. Night lighting at the Project Site would be low profile and at the necessary intensity to provide a safe walkable environment along walking paths. Roof terrace lighting would be of similar light levels, directed downward towards walkable surfaces, and shielded from view of the adjacent residential neighbors. All new street and pedestrian lighting within the public right-of-way would comply with applicable City regulations and would require approval from the Bureau of Street Lighting in order to maintain appropriate and safe lighting levels on sidewalks and roadways while minimizing light and glare on adjacent properties.

The proposed lighting sources would be similar to other lighting sources on the Project Site and in the Project Site vicinity and would not generate artificial light levels that are out of character with the surrounding area. Any new outdoor lighting provided by the Project would be low-level and would not result in a substantive change in ambient illumination levels over existing conditions. In addition, outdoor security and architectural lighting would be shielded and directed onto building surfaces and towards the interior of the Project Site to avoid light spillover onto sensitive uses. Project lighting would also meet all applicable LAMC lighting standards.

With regard to glare, building materials would include smooth troweled stucco, composite metal wall panels with wood finish, limestone panels and glass. In addition, all parking would be provided in a subterranean parking garage. As such, there would be limited potential from glare associated with parked vehicles. Glass used in building façades would also be low-reflective or treated with an anti-reflective coating to minimize glare. It is also noted that there is a grade difference ranging between approximately 14 feet to 42 feet from the adjacent single-family residential uses along the southern and eastern boundaries of the Project Site, such that the Project Site is situated below the

adjacent single-family residential uses. In addition, the backyards of these residential uses face the Project Site and include extensive existing landscaping. Further, the Project would incorporate additional perimeter landscaping to minimize views of the Project Site and any associated glare.

Based on the above, the Project would not create a new source of light or glare, which would adversely affect day or nighttime views in the area, and impacts would be less than significant.

b. Agricultural and Forest Resources

The Project Site is zoned as R3-1-O (Multiple Residential, Height District 1, Oil Drilling) and C2-1VL-O (Commercial, Height District 1VL, Oil Drilling) which permit a variety of residential and commercial uses. No agricultural uses or operations occur on-site or in the vicinity of the Project Site. The Project Site also does not include any forest or timberland. In addition, the Project Site and surrounding area are not mapped as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency Department of Conservation. The Project Site and surrounding area are also not enrolled under a Williamson Act Contract. As such, the Project would not convert farmland to a non-agricultural use, conflict with any zoning for agricultural uses or a Williamson Act Contract, conflict with existing zoning for, or cause rezoning of, forest land or timberland, result in the loss or conversion of forest land, or result in the conversion of farmland to non-agricultural use or in the conversion of forest land to non-forest use. No impacts to agriculture and forestry resources would occur.

c. Air Quality (Odors)

No objectionable odors are anticipated as a result of either construction or operation of the Project. Specifically, construction of the Project would involve the use of conventional building materials typical of construction projects of similar type and size. Any odors that may be generated during construction would be localized and temporary in nature and would not be sufficient to affect a substantial number of people.

With respect to Project operation, according to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project would not involve these types of uses. In addition, on-site trash receptacles would be contained, located, and maintained in a manner that promotes odor control, and therefore would not result in substantially adverse odor impacts.

In addition, the construction and operation of the Project would also comply with SCAQMD Rules 401, 402, and 403, regarding visible emissions violations.[20] In particular, Rule 402 provides that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.[21] Therefore, with compliance with existing regulatory requirements, the Project would not create odors that would adversely affect a substantial number of people.

Based on the above, the Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Impacts would be less than significant.

d. Biological Resources

The Project Site is located in an urbanized area and is currently developed with three multi-family residential developments and associated parking. Due to the urbanized and disturbed nature of the Project Site and the surrounding areas, and lack of large expanses of open space areas, species likely to occur on-site are limited to small terrestrial and avian species typically found in urbanized developed settings. Thus, the Project would not have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (USFWS). There are no riparian or other sensitive natural communities, or federally protected wetlands as defined by Section 404 of the Clean Water Act on the Project Site or in the surrounding area. In addition, there are no established native resident or migratory wildlife corridors on the Project Site or in the vicinity. Accordingly, development of the Project would not impact any regional wildlife corridors or native wildlife nursery sites. Furthermore, no water bodies that could serve as habitat for fish exist on the Project Site or in the vicinity. As the USFWS database of conservation plans and agreements does not show any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved habitat conservation plans applicable to the Project Site, the Project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other related plans.

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[20] *SCAQMD, Visible Emissions, Public Nuisance, and Fugitive Dust, www.aqmd.gov/home/regulations/compliance/inspection-process/visible-emissions-public-nuisance-fugitive-dust, accessed June 20, 2021.*

[21] *SCAQMD, Rule 402, Nuisance.*

Landscaping within the Project Site consists of 96 ornamental trees and shrubs, including eight street trees located within the portion of Bellwood Avenue proposed to be vacated and realigned, as well as ornamental trees whose trunks are on adjacent property but include roots and canopies on the Project Site. There are no trees on the Project Site that are considered protected by the City of Los Angeles Protected Tree Ordinance. Of the 96 ornamental trees identified on the Tree Survey, 65 trees would be removed as part of the Project, including eight street trees. In accordance with the Department of City Planning's policy, the on-site trees to be removed would be replaced on a 1:1 basis. In addition, pursuant to the requirements of the City of Los Angeles Urban Forestry Division, the eight street trees to be removed would be replaced on a 2:1 basis. Removal of the existing street trees in the public right-of-way would occur in accordance with the policies of the Los Angeles Department of Public Works, Bureau of Street Services, Urban Forestry Division. Therefore, the Project would not conflict with any local policies or ordinances protecting biological resources. Removal of trees would comply with the Migratory Bird Treaty Act (MBTA), which prohibits the take, possession, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to federal regulations. Additionally, California Fish & Game Code Section 3503 (Section 3503) states that "[i]t is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." No exceptions are provided in the code and CDFW has not promulgated regulations interpreting these provisions. To ensure regulatory compliance with the Migratory Bird Treaty Act and California Fish and Game Code, the Project would require that tree removal activities would take place outside of the nesting season (February 1–August 31), to the extent feasible. In addition, should vegetation removal activities occur during the nesting season, a biological monitor would be present during the removal activities to ensure that no active nests would be impacted. Compliance with the MBTA and California Fish and Game Code would ensure that impacts would be less than significant. Therefore, the Initial Study concluded that impacts to biological resources would be less than significant.

e. Cultural Resources

The Project Site, including the existing structures within the Project Site, has not been individually listed in or formally determined to be eligible for listing in the National Register or the California Register. In addition, the Project Site has not been designated as a Historic-Cultural Monument and is not located within an existing Historic Preservation Overlay Zone. Furthermore, as analyzed in the Historical Resource Assessment Report, included in Appendix A of this Draft EIR, the existing buildings on the Project Site are not eligible for historic designation in the National Register, the California Register, or as City of Los Angeles Historic-Cultural Monuments. Therefore, as no historic resources are located within the Project Site, removal of the existing buildings within the Project Site and

development of the Project would not create a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines. As such, the Initial Study concluded that impacts related to historical resources would be less than significant.

With regard to archaeological resources, the results of the archaeological records search conducted for the Project Site, included in Appendix A of this Draft EIR, indicate that there are no identified archaeological sites within the Project Site and one archaeological site located within a 0.5-mile radius of the Project Site. Nevertheless, the Project would require grading of the Project Site and excavations approximately 30 feet below grade, and previously unknown archaeological resources could be encountered. If an archaeological resource were to be discovered during construction of the Project, work in the area would cease, and deposits would first be evaluated for historic significance in accordance with CEQA Guidelines Section 15064.5. As set forth in CEQA Guidelines Section 15064.5, if the City determines that the archaeological resource is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code. If an archaeological resource does not meet the criteria for historical resources, but does meet the definition of a unique archaeological resource, construction work in the area would cease and the resource would be treated in accordance with the provisions of Section 21083.2 of the Public Resources Code. Therefore, given that there are no identified archaeological sites within the Project Site and the available regulations governing the treatment of any uncovered archaeological resources, the Project would not cause a substantial adverse change in the significance of an archaeological resource. As such, with the implementation of regulatory requirements, the Initial Study concluded that impacts to archaeological resources would be less than significant.

Lastly, as discussed in the Initial Study, included as Appendix A of this Draft EIR, no known traditional burial sites have been identified on the Project Site. In addition, if human remains were discovered during construction of the Project, work in the immediate vicinity would be halted, the County Coroner, construction manager, and other entities would be notified per California Health and Safety Code Section 7050.5, and disposition of the human remains and any associated grave goods would occur in accordance with Public Resources Code Section 5097.91 and 5097.98. With the implementation of regulatory requirements, the Project would not disturb any human remains. Therefore, the Initial Study concluded that the Project's impacts related to human remains would be less than significant.

f. Geology and Soils

The Project Site is not located within a currently established Alquist-Priolo Earthquake Fault Zone or a Fault Rupture Study Area.[22] In addition, no active faults with the potential for surface fault rupture are known to pass directly beneath the Project Site. Therefore, as concluded in the Initial Study, since the potential for surface rupture due to faulting occurring beneath the Project Site is considered low, impacts would be less than significant.

In addition, the Project would be constructed in accordance with the most current Los Angeles Building Code regulations and the recommendations of the design level geotechnical investigation prepared for the Project. As such, the Initial Study concluded that impacts related to strong seismic ground shaking would be less than significant.

The Project Site is not located in an area that has been identified by the State or the City of Los Angeles as being potentially susceptible to liquefaction. In addition, subsurface soils at the Project Site are well-consolidated and dense, and would not be expected to liquefy, even if water were present. Further, the historically highest groundwater level at the Project Site is greater than 40 feet below ground surface. Development of the Project would not exacerbate existing conditions that would cause people or structures to be exposed to strong seismic ground shaking. Thus, the three conditions associated with the occurrence of liquefaction (i.e., shallow groundwater, low-density, sandy soils, and strong ground motion) do not all exist on the Project Site. As such, based on the underlying conditions of the Project Site, the Geotechnical Investigation concluded that the potential for liquefaction and associated ground deformation beneath the Project Site is very low. Therefore, the Initial Study concluded that impacts associated with liquefaction would be less than significant.

Along the southern and eastern boundaries of the Project Site there is a grade difference from the adjacent single-family residential uses such that the Project Site is situated below the adjacent single-family residential uses. While the Project Site is sloped down from those single-family residential uses, the backyards of those single-family residential uses abut the Project Site and most of those yards are heavily landscaped and/or feature a boundary wall. As such, large areas of exposed soil and/or rocks that could fall onto the Project Site would not typically exist within the single-family residences. In addition, the Project Site is not located in a landslide area as mapped by the State or the City of Los Angeles. Further, the Project would be required to comply with plan review and LADBS permitting requirements, including the recommendations provided in the LADBS

[22] *Los Angeles General Plan Safety Element, Exhibit A, Alquist-Priolo Special Study Zones & Fault Rupture Study Areas, November 1996, p. 47.*

Geology and Soils Report Approval Letter and site-specific geotechnical recommendations contained in a final design-level geotechnical engineering report. As such, the Initial Study concluded that there would be no impacts from landslides and impacts associated with lateral spreading would be less than significant.

Project construction activities, including grading, excavation, and other construction activities, have the potential to disturb existing soils and expose soils to rainfall and wind, thereby potentially resulting in soil erosion. As discussed in the Initial Study, with compliance with regulatory requirements, impacts related to soil erosion or the loss of topsoil would be less than significant.

The soils underlying the Project Site are primarily sandy soils. In addition, as discussed in the Geotechnical Investigation, based on the granular nature of the underlying soils, the Project would not be prone to the effects of expansive soils. Therefore, the Project would not be located on expansive soil that would create a substantial direct or indirect risk to life or property. In addition, through standard construction practices involving excavation activities and the associated removal of underlying soils as well as the subsequent use of engineered soils, any potential effects associated with expansive soils would be addressed. As such, the Project would not increase the expansion potential of underlying soils. Therefore, the Initial Study concluded that impacts related to unstable and expansive soils would be less than significant.

The Project's wastewater demand would be accommodated via connections to the existing wastewater infrastructure. As such, the Initial Study concluded that the Project would not require the use of septic tanks or alternative wastewater disposal systems and would not result in impacts related to the ability of soils to support septic tanks or alternative wastewater disposal systems.

g. Hazards and Hazardous Materials

The types and amounts of hazardous materials that would be used in connection with the Project would be typical of those used in the operation of eldercare facilities. Specifically, operation of the proposed uses would be expected to involve the routine use of small quantities of potentially hazardous materials typical of those used in residential and commercial uses, including cleaning products, paints, and those used for maintenance of landscaping. Operation of the Project could also involve the routine use of potentially hazardous materials typical of those used in a small medical facility, including biohazards waste and cleaning agents. As with Project construction, all hazardous materials used on the Project Site during operation would be used, stored, and disposed of in accordance with all applicable federal, state and local requirements. As such, any associated risk would be adequately reduced to a less than significant level through compliance with these standards and regulations.

The Phase I Environmental Site Assessment Report (ESA), included in Appendix A of this Draft EIR, included a review of environmental records for the Project Site and a site reconnaissance to identify potential on-site hazards and/or the handling of hazardous materials. During the site reconnaissance visit, no evidence of hazardous substances, aboveground storage tanks or USTs, polychlorinated biphenyls were identified on-site. Based on the age of the existing buildings on-site, there is a possibility that asbestos-containing materials (ACM) and lead-based paint (LBP) may be encountered during construction. In the event any suspect ACM or LBP is found, the Project would adhere to all federal, State, and local regulations prior to their removal. Mandatory compliance with applicable federal and State standards and procedures would reduce risks associated with ACM and LBP to less than significant levels.

The identification of a former gas and oil service station, located at the easternmost northern adjoining property (10236 West Olympic Boulevard), is not considered a recognized environmental condition (REC) as the site has since been redeveloped with a hotel and underground parking garage. Similarly, the identification of a former gas and oil service station at the western adjoining property located at 10350 West Olympic Boulevard is not considered a REC as the property was issued a case-closed designation in 2009, and the property has been redeveloped. However, the former gas and oil service station and auto repair operations on the westernmost northern adjoining property (10344 West Olympic Boulevard), and the existing dry-cleaning operations and smog and oil-change operations on the property are considered RECs. Tetrachloroethylene (PCE) was detected as recently as 2007 in wells located downgradient of the drycleaners which indicates that dry-cleaning operations may have impacted groundwater beneath the drycleaners and adjoining properties (including the Project Site). Based on the identified RECs, a Phase II ESA, included in Appendix A of this Draft EIR, was prepared to further evaluate the impacts to soil and soil vapor beneath the Project Site due to past and current operations at the northern adjoining property. The Phase II ESA also included an initial screening to evaluate whether methane was present in soil-vapor.

As evaluated in the Phase II ESA, methane was detected in eight of the 12 soil vapor probes at a concentration of 0.1 percent (or 1,000 parts per million) during the initial round of monitoring conducted on May 1, 2018. It is noted that this concentration is equal to the minimum detection limit of the instrument, and that the meter was recalibrated prior to conducting the second round of readings on May 2, 2018. Methane was not detected in any of the soil vapor probes during the second screening. Nevertheless, all new buildings and paved areas located within a Methane Zone would comply with the City of Los Angeles' Methane Mitigation Ordinance No. 175790. The soil vapor monitoring conducted at the Project Site did encounter PCE and trichloroethylene in excess of residential screening levels. However, the Phase II ESA determined that based on the levels encountered and implementation of applicable LADBS requirements, there would not be unacceptable health risk to occupants. In addition, adherence to standard construction

safety measures, as well as compliance with California Occupational Safety and Health Act safety requirements, would serve to reduce the risk in the event that elevated levels of these soil gases are encountered during grading and construction.

As discussed in the Phase II ESA, in the soil samples analyzed, PCE was detected in just one sample at a concentration that is less than the residential screening level, and no other VOCs were detected in any of the samples analyzed. Total petroleum hydrocarbons (TPH) in the heavy oil range was detected in three samples also below the residential screening level. TPH in the gasoline and diesel ranges were not detected in any of the soil samples. The likely source of the PCE concentration in soil is the adjacent dry-cleaning facility. The reported concentrations of oil range TPH could be related to the automotive service facilities on the north adjacent property. As concluded in the Phase II ESA, the soils at the Project Site do not appear to be significantly impacted and are believed to be acceptable for reuse onsite. In addition, based on the reported concentrations of VOCs and TPH in the soil samples analyzed, it is not anticipated that there would be any special handling or disposal requirements associated with soils that might be exported from the Project Site during construction. In the event that contaminated soils are encountered during construction, or construction occurs in areas of known or potential contamination, the nature and extent of the contamination would be determined and appropriate handling, disposal, and/or treatment would be implemented in accordance with applicable regulatory requirements, including SCAQMD Rule 1166. Therefore, compliance with existing regulations would ensure the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the handling and disposal of contaminated soil that may be encountered on-site.

Based on the above, with compliance with regulatory requirements, the Project would not result in a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment. Thus, as concluded in the Initial Study, impacts related to the release of hazardous materials into the environment would be less than significant.

There are no schools within 0.25 mile of the Project Site. However, the Project Site is located within 0.5 mile of Le Lycée Français De Los Angeles: Century City Campus at 10361 Pico Boulevard. Although the Project would have the potential to emit and would involve the handling of hazardous materials, particularly during construction activities, all such activities involving the handling and disposal of hazardous materials and wastes would occur in compliance with all applicable federal, state, and local requirements concerning the handling and disposal of hazardous waste. Therefore, with compliance with relevant regulations and requirements, the Project would not create a significant hazard to nearby schools, and impacts regarding the Project's emission or handling of hazardous materials and wastes would be less than significant.

The Project Site was not listed on any of the standard regulatory databases searched when the Phase I ESA was conducted. Therefore, the Project would not exacerbate existing conditions associated with these listed items because the Project Site itself is not listed on any of the databases that were reviewed in the Phase I ESA. Thus, impacts related to creating a hazard to the public or the environment would be less than significant.

The Project Site is not located within 2 miles of an airport or a private airstrip or located within an airport planning area and would not result in a safety hazard for people residing or working in the area.

According to the Safety Element of the City of Los Angeles General Plan, the nearest disaster route to the Project Site is Olympic Boulevard, which is located approximately 70 feet to the north of the Project Site and provides arterial access and is in the immediate vicinity of the Project Site.[23] Adjacent to the Project Site, Bellwood Avenue is a u-shaped street that connects to Olympic Boulevard at each end. As described in Attachment A, Project Description, of this Initial Study, as part of the Project, the portion of Bellwood Avenue that bisects the Project Site would be vacated and realigned. However, access to Olympic Boulevard would be maintained from both sides of Bellwood Avenue, including during construction. As such, the Project would not impair emergency access to Olympic Boulevard. Thus, as discussed in the Initial Study, impacts related to implementation of an adopted emergency response plan would be less than significant.

There are no wildlands located in the vicinity of the Project Site. The Project Site is not located within a City-designated Very High Fire Hazard Severity Zone,[24] nor is it located within a City-designated fire buffer zone.[25] Furthermore, the Project would be developed in accordance with LAMC requirements pertaining to fire safety. Additionally, the proposed residential uses would not create a fire hazard that has the potential to exacerbate the current environmental condition relative to wildfires. Therefore, the Project would not subject people or structures to a significant risk of loss, injury, or death as a result of

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[23] *Los Angeles General Plan Safety Element, November 1996, Exhibit H, Critical Facilities and Lifeline Systems, p. 61.*

[24] *City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Report for APNs 4315018034, 4315018033, 4315018032, 4315018031, 4315018030, and 4315018029, http://zimas.lacity.org/, accessed September 19, 2019. The Very High Fire Hazard Severity Zone was first established in the City of Los Angeles in 1999 and replaced the older "Mountain Fire District" and "Buffer Zone" shown on Exhibit D of the Los Angeles General Plan Safety Element.*

[25] *City of Los Angeles, Safety Element of the Los Angeles City General Plan, November 26, 1996, Exhibit D, p. 53.*

exposure to wildland fires. As such, the Initial Study concluded that impacts related to wildland fires would be less than significant.

h. Hydrology and Water Quality

During construction of the Project, particularly during the grading phase, stormwater runoff from precipitation events could cause exposed and stockpiled soils to be subject to erosion and convey sediments into municipal storm drain systems. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. Pollutant discharges relating to the storage, handling, use, and disposal of chemicals, adhesives, coatings, lubricants, and fuel could also occur. However, as Project construction would disturb more than 1 acre of soil, the Project would be required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. In accordance with the requirements of the permit, a SWPPP would be developed and implemented during construction of the Project. The SWPPP would set forth BMPs, including sandbags, storm drain inlets protection, stabilized construction entrance/exit, wind erosion control, and stockpile management, to minimize the discharge of pollutants in stormwater runoff during construction. In addition, Project construction activities would occur in accordance with City grading permit regulations (Chapter IX, Division 70 of the LAMC), such as the preparation of an erosion control plan, to reduce the effects of sedimentation and erosion. With compliance with these existing regulatory requirements, impacts to water quality during construction would be less than significant.

Operation of the Project would introduce sources of potential stormwater pollution that are typical of residential uses. Stormwater runoff from precipitation events could potentially carry urban pollutants into municipal storm drains. The implementation of BMPs required by the City's LID Ordinance would target these pollutants that could potentially be carried in stormwater runoff. As discussed in the Hydrology and Water Quality Memorandum, included in Appendix A of this Draft EIR, the existing Project Site does not have any structural or LID BMPs to treat or infiltrate stormwater. Therefore, implementation of the LID features proposed as part of the Project would result in an improvement in surface water quality runoff as compared to existing conditions. Implementation of the proposed BMP system would result in the treatment of the entire required volume for the Project Site and the elimination of pollutant runoff up to the 85th percentile storm event. With the incorporation of LID BMPs and compliance with these existing regulatory requirements, operation of the Project would not result in discharges that would cause regulatory standards to be violated. Impacts on water quality during operation would be less than significant.

The historically highest groundwater level in the area is greater than 40 feet below ground surface (bgs). Anticipated excavation depths up to 30 feet bgs would occur to

provide for the new subterranean parking levels. Considering the historic high groundwater level, temporary dewatering are not expected to occur during construction. While dewatering during construction is not anticipated, in the event groundwater is encountered during construction, temporary dewatering systems such as dewatering tanks, sand media particulate, pressurized bag filters, and cartridge filters would be utilized in compliance with the NPDES permit. Thus, construction of the Project would result in less-than-significant impacts related to groundwater.

With regard to groundwater recharge, the percolation of precipitation that falls on pervious surfaces is variable, depending on the soil type, condition of the soil, vegetative cover, and other factors. The Project Site is currently approximately 89 percent impervious. With implementation of the Project, impervious surfaces would comprise approximately 87 percent of the Project Site. The increase in pervious areas would improve the groundwater recharge capacity of the Project Site over existing conditions. Thus, the Project would not interfere substantially with groundwater recharge such that groundwater management would be impeded.

Construction activities for the Project would involve removal of the existing structures and associated hardscape as well as the excavation and removal of soil. These activities have the potential to temporarily alter existing drainage patterns and flows on the Project Site by exposing the underlying soils, modifying flow direction, and making the Project Site temporarily more permeable. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. However, as discussed above, in accordance with NPDES requirements the Project would implement a SWPPP that would specify BMPs and erosion/siltation control measures to be used during construction to manage runoff flows so that runoff would not impact off-site drainage facilities and receiving waters. In addition, the Project would be required to comply with all applicable City grading permit regulations that require necessary measures, plans, and inspections to reduce sedimentation and erosion.

As previously discussed, the Project Site is comprised of approximately 89 percent impervious surfaces under existing conditions. With implementation of the Project, the amount of landscaped area would increase, resulting in a decrease in the amount of impervious surfaces on the Project Site to approximately 87 percent. This increase in pervious surfaces would result in a reduction in stormwater runoff. Accordingly, there would be no increase in runoff volumes into the existing storm drain system. In addition, the implementation of BMPs required by the City's LID Ordinance would target runoff pollutants that could potentially be carried in stormwater runoff.

Based on the above, through compliance with all applicable NPDES requirements, including preparation of a SWPPP and implementation of BMPs, as well as compliance with applicable City grading regulations, the Project would not substantially alter the

existing drainage pattern of the Project Site or surrounding area such that substantial erosion, siltation, or on-site or off-site flooding would occur. Additionally, the Project would not conflict with or obstruct implementation of a water quality control plan or a sustainable groundwater management plan. Therefore, the impact would be less than significant.

The Project Site is not located within a 100-year flood plain as mapped by the Federal Emergency Management Agency (FEMA) or by the City of Los Angeles.[26,27] The Safety Element of the City of Los Angeles General Plan does not map the Project Site as being located within a flood control basin or within a potential inundation area.[28] The Project Site is located approximately 6 miles east of the Pacific Ocean, and the Safety Element of the General Plan does not map the Project Site as being located within an area potentially affected by a tsunami.[29] Therefore, no tsunami or tsunami events would be expected to impact the Project Site.

i. Land Use and Planning

The Project would replace the existing multi-family residential uses within the Project Site with a new residential eldercare facility. Additionally, as part of the Project, the portion of Bellwood Avenue that bisects the Project Site would be vacated and realigned. However, through public access would be maintained, and access to Olympic Boulevard from adjacent properties along Bellwood Avenue would continue to be available. In addition, the Project does not propose a freeway or other large infrastructure that would divide the existing surrounding community. Therefore, the Project would not physically divide an established community. Impacts related to the physical division of an established community would be less than significant.

j. Mineral Resources

No mineral extraction operations currently occur on the Project Site. Furthermore, the Project Site is not located within a City-designated Mineral Resource Zone where significant mineral deposits are known to be present, or within a mineral producing area as classified by the California Geologic Survey. While the Project Site is located within a City-

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[26] *Federal Emergency Management Agency, Flood Insurance Rate Map, Panel Number 06037C1595F, effective September 26, 2008.*

[27] *City of Los Angeles, Safety Element of the Los Angeles City General Plan, November 26, 1996, Exhibit F, p. 57.*

[28] *Los Angeles General Plan Safety Element, November 1996, Exhibit G, Inundation & Tsunami Hazard Areas, p. 59.*

[29] *City of Los Angeles, Safety Element of the Los Angeles City General Plan, November 26, 1996, Exhibit G, p. 59.*

designated oil field or oil drilling area[30] as well as within the limits of the Cheviot Hills Oil Field,[31] according to the California Geologic Energy Management Division, previously known as the California State Division of Oil, Gas and Geothermal Resources, there are no wells located on the Project Site or adjacent properties, and the nearest known oil well is approximately 1,600 feet east of the Project Site and is currently inactive and plugged. Therefore, the Initial Study concluded that no impacts related to mineral resources would occur.

k. Noise

The Project Site is not located within the vicinity of a private airstrip or an airport land use plan or within 2 miles of an airport. The nearest airport is the Santa Monica Airport located approximately 2.8 miles southwest of the Project Site. Therefore, the Project would not expose people working in the Project area to excessive noise levels from airports or airstrips, and no impacts would occur.

l. Population and Housing

The Project would remove three existing multi-family residential developments with a total of 112 residential units and would construct 192 senior housing residential units. The Project would result in a net increase of 80 residential units compared to existing conditions. The proposed type of units is not typically associated with a substantial increase in population growth, but rather serving the need for senior housing. Therefore, as determined in the Initial Study, the Project would not induce substantial population growth in the area. With regard to infrastructure, all circulation improvements planned as part of the Project are intended to improve circulation flows and safety throughout the Project Site and vicinity. Any utility and other infrastructure improvements that may be required by the Project would be necessary to connect the proposed uses to the existing main infrastructure system. Therefore, impacts would be less than significant.

m. Public Services

(1) Schools

The Project would construct an eldercare facility for persons 62 years of age or older that would include 192 senior housing residential units. Although the Project would include

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[30] *City of Los Angeles, Safety Element of the Los Angeles City General Plan, November 26, 1996, Exhibit E, p. 55.*

[31] *California Department of Conservation, Division of Oil, Gas and Geothermal Resources, 2018, Well Finder, https://maps.conservation.ca.gov/doggr/wellfinder/#close, accessed November 13, 2018.*

residential uses, these residential uses are not the types of residential uses that would generate school-aged children and a corresponding demand for school services in the vicinity of the Project Site. Therefore, the development of the Project would not directly increase the number of students within the service area of LAUSD. In addition, the number of students that may be indirectly generated by the Project that could attend LAUSD schools serving the Project Site would not be anticipated to be substantial because not all employees of the Project are likely to reside in the vicinity of the Project Site. Furthermore, pursuant to Senate Bill 50, the Applicant would be required to pay development fees for schools to LAUSD prior to the issuance of the Project's building permit. Pursuant to Government Code Section 65995, the payment of these fees fully removes Project-related school impacts. Therefore, impacts would be less than significant.

(2) Parks

The proposed eldercare facility use is not typically associated with a substantial increase in the use of nearby parks as many of the residents rely on some form of care. Rather, these types of facilities generally provide a wide variety of activities and amenities onsite. The Project would provide 14,630 square feet of usable common and private open space, exceeding the LAMC-required amount of open space of 7,800 square feet. The proposed open space amenities include a 6,490-square-foot courtyard on Level P1 and a 2,740-square-foot terrace on the ground level. The P1 level would also provide 27,532 square feet of indoor common areas including a wellness center, gym, indoor pool and spa, common dining areas, and activity rooms. In addition, an outdoor terrace would be provided on each level between Level 2 and Level 6 for assisted living and independent living residents. Therefore, due to the amount, variety, and availability of the proposed open space and recreational amenities to be provided within the Project Site, it is anticipated that Project residents would utilize the on-site open space and common areas to meet their recreational needs. While it is possible that some of the Project's new employees may utilize local parks and recreational facilities, this increased demand would be negligible due to the nature of the employee's work. It is anticipated that the majority of Project employees, such as nurses, social workers, and caretakers, would be more likely to use parks and recreational facilities near their homes during non-work hours. Furthermore, it is anticipated that some of the employment opportunities generated by the Project would be filled by people already residing in the vicinity of the Project Site and who already generate a demand for parks. As such, the potential indirect growth in demand for parks and recreational facilities would be minimal and impacts would be less than significant.

(3) Other Public Facilities

Based on the type of residential uses proposed, the Project would not be expected to generate a substantial increase in the use of the Palms-Rancho Park Branch Library. Rather, the demand on library services may actually decrease as not all residents would be

physically able to travel to the library. In addition, as Project employees would be more likely to use library facilities near their homes during non-work hours and given that some of the employment opportunities generated by the Project would be filled by people already residing in the vicinity of the Project Site, Project employees and the potential indirect population generation that could be attributable to those employees would generate minimal demand for library services. As such, any direct or indirect demand for library services generated by Project employees would be negligible. Therefore, impacts on library facilities would be less than significant.

n. Recreation

As discussed above, the proposed eldercare facility use is not typically associated with a substantial increase in the use of nearby parks and recreational facilities as many of the residents rely on some form of care and a wide variety of activities and amenities are provided on site. The Project's demand for parks and recreational facilities would be offset by the 14,630 square feet of usable open space that would be provided on-site. Due to the nature of the eldercare facility use, and the amount and availability of the proposed open space and recreational amenities within the Project, it is anticipated that Project residents would generally utilize on-site open space and common areas to meet their recreational needs. Thus, while some of the Project's residents may be expected to utilize off-site public parks and recreational facilities to some degree, the Project would not substantially increase the demand for off-site public parks and recreational facilities such that substantial physical deterioration of those facilities would occur or be accelerated. The impact on parks and recreational facilities would be less than significant.

o. Transportation

Through public access would be maintained from both sides of Bellwood Avenue through the Project Site, and the existing intersections of Bellwood Avenue and Olympic Boulevard would not be affected by the proposed realignment of Bellwood Avenue as part of the Project. In addition, the proposed realignment would not introduce any sharp curves or involve incompatible uses. Further, the proposed realignment of Bellwood Avenue would be subject to review and approval of the City Department of Building and Safety, Los Angeles Department of Transportation, and Bureau of Engineering to ensure adequate design. Additionally, the driveways and vehicular motor court for the Project would be placed along the realigned portion of Bellwood Avenue and would be designed and located at a distance from Olympic Boulevard to limit queue spillovers into the public right-of-way and interruptions to pedestrian flow and safety. Therefore, the Project's motor court and driveways would not substantially increase vehicle-vehicle conflicts and would not present any geometric design hazards as it related to traffic movement. The driveway design would not restrict sight lines, allowing drivers to safely identify approaching vehicles,

pedestrians, and bicyclists before committing to turn. Thus, impacts would be less than significant.

p. Utilities and Service Systems

(1) Stormwater

Development of the Project would result in an increase in the landscaped areas throughout the Project Site and would reduce the amount of impervious surfaces on the Project Site from approximately 89 percent to approximately 87 percent. Accordingly, there would be a decrease in runoff volumes into the existing storm drain system. In addition, the implementation of BMPs required by the City's LID Ordinance would target runoff pollutants that could potentially be carried in stormwater runoff. Therefore, the Project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

(2) Telecommunications Facilities

The Project Site is located in an area served by existing telecommunications infrastructure. Installation of new telecommunications infrastructure would primarily take place on-site, with minor off-site work associated with connections to the existing system. Construction impacts associated with the installation of telecommunications infrastructure would primarily involve trenching in order to place the lines below surface. However, the Project would prepare a Construction Traffic Management Plan pursuant to Project Design Feature TR-PDF-1, which would ensure safe pedestrian access as well as emergency vehicle access and safe vehicle travel in general, to reduce any temporary pedestrian and traffic impacts occurring as a result of construction activities. In addition, when considering impacts resulting from the installation of any required telecommunications infrastructure, all impacts are of a relatively short duration and would cease to occur when installation is complete. No upgrades to off-site telecommunications systems are anticipated. Any work that may affect services to the existing telecommunications lines would be coordinated with service providers.

(3) Solid Waste

The construction activities necessary to build the Project would generate debris, some of which may be recycled to the extent feasible. Pursuant to the requirements of Senate Bill (SB) 1374, the Project would implement a construction waste management plan to recycle and/or salvage a minimum of 75 percent of non-hazardous demolition and construction debris. Materials that could be recycled or salvaged include asphalt, glass, and concrete. Debris not recycled could be accepted at the unclassified landfill (Azusa

Land Reclamation) within Los Angeles County and within the Class III landfills open to the City. After accounting for mandatory recycling, the Project would result in approximately 764 tons of construction and demolition waste. Given the remaining permitted capacity the Azusa Land Reclamation facility, which is approximately 55.71 million tons, as well as the remaining 149.77 million tons of capacity at the Class III landfills serving the County, the landfills serving the Project Site would have sufficient capacity to accommodate the Project's construction solid waste disposal needs.

Upon full buildout, the Project would generate approximately 527 tons of solid waste per year. When accounting for the existing multi-family residential uses to be removed, the Project would result in a net increase in solid waste generation of 277 tons per year. The estimated solid waste is conservative because the waste generation factors used do not account for recycling or other waste diversion measures such as compliance with Assembly Bill 341, which requires California commercial enterprises and public entities that generate four cubic yards or more per week of waste, and multi-family housing with five or more units, to adopt recycling practices. Likewise, the analysis does not include implementation of the City's Zero Waste Plan, which is expected to result in a reduction of landfill disposal Citywide with a goal of reaching a Citywide recycling rate of 90 percent by the year 2025.[32] The estimated annual net increase in solid waste that would be generated by the Project represents approximately 0.0002 percent of the remaining capacity (149.77 million tons) for the County's Class III landfills open to the City of Los Angeles.[33] As such, sufficient landfill capacity is expected to be available to accommodate the Project.

The Project would be consistent with the applicable regulations associated with solid waste. Specifically, the Project would provide adequate storage areas in accordance with the City of Los Angeles Space Allocation Ordinance (Ordinance No. 171,687), which requires that development projects include an on-site recycling area or room of specified size. The Project would also comply with AB 939, AB 341, AB 1826, and City waste diversion goals, as applicable, by providing clearly marked, source-sorted receptacles to facilitate recycling. Since the Project would comply with federal, State, and local statutes and regulations related to solid waste, impacts would be less than significant.

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[32] *LA Sanitation, Solid Waste Integrated Resources Plan, www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-zwswirp?_afrLoop=3608041245788654&_afrWindowMode=0&_afrWindowId=null&_adf.ctrl-state=8vrc5bges_179#!%40%40%3F_afrWindowId%3Dnull%26_afrLoop%3D3608041245788654%26_afrWindowMode%3D0%26_adf.ctrl-state%3D8vrc5bges_183, accessed December 13, 2018.*

[33] *(277 tons per year/149.77million tons) x 100 ≈ 0.0002%*

q. Wildfire

As discussed above, in Section 6.g, the Project Site is not located within a City-designated Very High Fire Hazard Severity Zone[34] or fire buffer zone.[35] In addition, the Project Site is not located in or near State responsibility areas or lands classified as very high fire hazard severity zones. Therefore, no impacts related to the following would occur: (1) the impairment of an adopted emergency response plan or emergency evaluation plan related to wildfire; (2) the exposure of Project occupants to pollutant concentrations from a wildfire; (3) the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or (4) the exposure of people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes.

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[34] *City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Report for APNs 4315018034, 4315018033, 4315018032, 4315018031, 4315018030, and 4315018029, http://zimas.lacity.org/, accessed September 19, 2019. The Very High Fire Hazard Severity Zone was first established in the City of Los Angeles in 1999 and replaced the older "Mountain Fire District" and "Buffer Zone" shown on Exhibit D of the Los Angeles General Plan Safety Element.*

[35] *City of Los Angeles, Safety Element of the Los Angeles City General Plan, November 26, 1996, Exhibit D, p. 53.*

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VII. References

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VIII. Acronyms and Abbreviations

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µg	microgram
µg/m^3	micrograms per cubic meter
µm	micrometer
1,1,1-trichloroethane	methyl chloroform
2010 Bicycle Plan	*2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element*
2012–2035 RTP/SCS	2012–2035 Regional Transportation Plan/Sustainable Communities Strategy
2016–2040 RTP/SCS	2016–2040 Regional Transportation Plan/Sustainable Communities Strategy
2020–2045 RTP/SCS	2020–2045 Regional Transportation Plan/Sustainable Communities Strategy
2017 Update	*2017 Climate Change Scoping Plan Update: The Strategy for Achieving California's 2030 Greenhouse Gas Target*
AAM	annual arithmetic mean
AB	Assembly Bill
Action Plan	California Water Action Plan
ADA	Americans with Disabilities Act
ADT	average daily traffic
AEGLs	acute exposure guideline levels
AES	Acoustical Engineering Services
AFY	acre-feet per year
Air Basin	South Coast Air Basin
APA	Administrative Procedure Act
AQMP	air quality management plan

AR4	Fourth Assessment Report
ATCM	airborne toxic control measure
BACT	best available control technology
BEN	bicycle enhanced network
BLN	bicycle lane network
BLS	basic life support
BMPs	best management practices
BOE	Bureau of Engineering
BTU	British thermal units
C_2F_6	hexafluoroethane
$C_2H_4F_2$	1,1-Difluoroethane
CA-2	Santa Monica Boulevard
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalARP	California Accidental Release Program
CalEEMod	California Emissions Estimator Model®
CalEPA	California Environmental Protection Agency
CALGreen Code	California Green Building Code
California ISO	California Independent System Operator
CALINE4	California LINE Source Dispersion Model, version 4
CalOSHA	California Occupational Safety and Health Act
CalRecycle	California Department of Resources Recycling and Recovery
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAS	climate adaptation strategy

CAT	Climate Action Team
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFA	California Department of Food and Agriculture
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CEUS	commercial end-use survey
cf	cubic feet
CF_4	tetrafluoromethane
CFR	Code of Federal Regulations
CH_2FCF_3	1,1,1,2-Tetrafluoroethane
CH_4	methane
CHF_3	Fluoroform
CHRIS	California Historical Resources Information System
CI	carbon intensity
City	City of Los Angeles
City's IRP	City of Los Angeles Integrated Resources Plan
Climate Registry	California Climate Action Registry
CMP	congestion management program
CNEL	community noise equivalent level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2/MWh	CO_2 per MW-hour
COG	council of governments
Community Plan	West Los Angeles Community Plan
COMPSTAT	computer statistics
Conservation Element	General Plan Conservation Element

CPUC	California Public Utilities Commission
CTC	California Transportation Commission
CVC	California Vehicle Code
dB	decibel
dBA	A-weighted decibel filtering system
DHS	Department of Health Services
DOE	U.S. Department of Energy
DOF	California Department of Finance
DPM	diesel particulate matter
DPR	California Department of Parks and Recreation
du	dwelling units
DWR	Department of Water Resources
ED 5	Executive Directive No. 5
EIA	U.S. Energy Information Administration
EIR	environmental impact report
EISA	Energy Independence and Security Act of 2007
EMFAC	EMission FACtor
EMS	emergency medical services
ERO	electric reliability organization
ESA	Endangered Species Acts
EVSE	electric vehicle supply equipment
FAR	floor-area ratio
FED to the Climate Change Scoping Plan	*Climate Change Scoping Plan Functional Equivalent Document*
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FIND	facility information database
First Update	*First Update to the Climate Change Scoping Plan: Building on the Framework*

FPS	fire preemption system
Framework Element	City of Los Angeles General Plan Framework Element
FTA	Federal Transit Administration
FY	fiscal year
gal	gallons
General Plan	City of Los Angeles General Plan
General Plan Framework	City of Los Angeles General Plan Framework Element
GHG	greenhouse gas
GoBiz	Governor's Office of Business and Economic Development
gpd	gallons per day
gpm	gallons per minute
Great Streets for Los Angeles	*The City of Los Angeles Complete Streets Design Guide*
GSA	groundwater sustainability agency
GWh	gigawatt-hours
GWP	global warming potential
H_2S	hydrogen sulfide
HAP	hazardous air pollutant
HCD	California Department of Housing and Community Development
HFCs	hydrofluorocarbons
HQTA	high-quality transit area
HRA	heath risk assessment
HVAC	heating/ventilation/air conditioning
HWRP	Hyperion Water Reclamation Plant
I-10	Santa Monica Freeway
I-405	San Diego Freeway
IEPR	Integrated Energy Policy Report
IFFAR	information of fire flow availability request
IID	Imperial Irrigation District

IPCC	Intergovernmental Panel on Climate Change
IRP	integrated water resources plan
ITE	Institute of Transportation Engineers
kWh	kilowatt-hour
LADOT	Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAMC	Los Angeles Municipal Code
LAPD	Los Angeles Police Department
LASAN	Los Angeles Bureau of Sanitation
lbs/day	pounds per day
LCFS	low carbon fuel standard
L_{dn}	day/night average sound level
LED	light-emitting diode
L_{eq}	equivalent sound level
LEV	low-emission vehicle
LID	low-impact development
L_{max}	maximum sound level
LOS	level of service
LST	localized significance threshold
Mandatory Reporting Rule	Mandatory Reporting of Greenhouse Gas Emissions
MATES	Multiple Air Toxics Exposure Study
Metro	Los Angeles County Metropolitan Transportation Authority
mgd	million gallons per day
MMBtu	million British thermal units
MOU	memorandum of understanding
mpg	miles per gallon
MPO	metropolitan planning organization

MRR	Mandatory Reporting of Greenhouse Gas Emissions
$MTCO_2e$	metric tons CO_2e
MW	megawatts
MWD	Metropolitan Water District of Southern California
MWh	megawatt-hours
MXD	mixed-use development
N/A	Not Applicable
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEN	neighborhood enhanced network
NERC	North American Electric Reliability Corporation
NF_3	nitrogen trifluoride
NFPA	National Fire Protection Association
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO_2	nitrogen dioxide
Noise Element	Noise Element of the General Plan
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OFFROAD	Off-Road Emissions Inventory Program
One Water LA Plan	One Water LA 2040 Plan
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Acts
Pb	lead

PCE	passenger car equivalency
PED	pedestrian enhanced district
perc	perchloroethylene
PFCs	perfluorocarbons
PHEV	plug-in hybrid electric vehicles
Plan for a Healthy Los Angeles	*Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan*
$PM_{2.5}$	fine particulate matter ≤ 2.5 microns
PM_{10}	particulate matter ≤ 10 microns
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
psi	pounds per square inch
Rancho	Rancho San Jose de Buenos Ayres
RASS	residential appliance saturation survey
RCP&G	Regional Comprehensive Plan and Guide
RENEW LA	Recovering Energy, Natural Resources and Economic Benefit from Waste for Los Angeles
RFS	renewable fuel standard
RHNA	regional housing needs assessment
rm	rooms
RMS	root-mean square
ROG	reactive organic compound
RPS	renewable portfolio standards
RSO	rent stabilization ordinance
RTP	regional transportation plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SAFE	safer affordable fuel-efficient
SAR	service advisory request

SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCAR	sewer capacity availability review
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCS	sustainable communities strategy
SDG&E	San Diego Gas and Electric
SDWCA	San Diego County Water Authority
sf	square feet
SF_6	sulfur hexafluoride
SLCP	short-lived climate pollutants
SLF	sacred lands file
SO_2	sulfur dioxide
SO_4^2	sulfates
SoCalGas	Southern California Gas Company
SO_X	sulfur oxides
SR-1	State Route 1
SR-2	State Route 2
SRA	source receptor area
Strategic Growth Council SGC	
Supplemental FED	*Supplemental FED to the Climate Change Scoping Plan*
SUSMP	standard urban stormwater mitigation plan
Sustainable City pLAn 2019	L.A.'s Green New Deal
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAG	transportation assessment guidelines

TCA	methyl chloroform
TCM	transportation control measure
TCR	tribal cultural resources
TCR Report	Tribal Cultural Resources Report for The Bellwood Avenue Project
TDM	transportation demand management
TEN	transit enhanced network
TeNS	Technical Noise Supplement
Thresholds Guide	2006 L.A. CEQA Thresholds Guide
TIA	transportation impact assessment
TNM	traffic noise model
TOD	transit-oriented development
TPA	transit priority area
tpd	tons per day
Transportation Study	*Transportation Assessment for the Senior Residential Community at the Bellwood Project*
ULARA	Upper Los Angeles River Area
UNFCCC	United Nations Framework Convention on Climate Change
USDA	U.S. Department of Agriculture
USDOE	U.S. Department of Energy
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
Utility Report	*Senior Residential Community at the Bellwood—Water, Sewer, and Energy Infrastructure Assessment Report*
UWMP	2015 Urban Water Management Plan
VMT Calculator	City of Los Angeles VMT Calculator Version 1.3
VMT	vehicle-miles traveled
VOC	volatile organic compound
W	watts

West LA TIMP	West Los Angeles Transportation Improvement and Mitigation Specific Plan
Wh	watt-hours
WLA TIMP	West Los Angeles Transportation Improvement and Mitigation Specific Plan
WSA	water supply assessment
ZEV	zero-emission vehicle
ZI	zoning information
ZIMAS	Zone Information and Map Access System
ZNE	zero net energy

IX. List of Preparers

IX. List of Preparers

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Appendices

Appendix A

Initial Study, Notice of Preparation (NOP), and NOP Comment Letters

Appendix A.1

Initial Study

LOS ANGELES
DEPARTMENT OF CITY
PLANNING
221 North Figueroa St., Suite 1350
Los Angeles, CA 90012

INITIAL STUDY

Senior Residential Community at The Bellwood

Case Number: ENV-2018-7182-EIR

Project Location: 10328–10384 and 10341–10381 Bellwood Avenue, Los Angeles, CA 90064

Community Plan Area: West Los Angeles

Council District: 5—Koretz

Project Description: The Project proposes the development of a new eldercare facility for persons 62 years of age and older on a 2.22-acre (96,792 square feet) site located at 10328–10384 and 10341–10381 Bellwood Avenue (Project Site) in the West Los Angeles Community Plan area of the City of Los Angeles (City). The Project Site includes the portion of Bellwood Avenue that bifurcates the Project Site. The Project would include 192 senior housing residential units, comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms; 50,463 square feet of indoor common areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area; and 14,630 square feet of outdoor common areas, including several courtyards and terraces that would be distributed throughout the Project Site. The proposed uses would be located within a single building ranging in height from 38 feet to 70 feet, or three to six stories. A total of 140 vehicle parking spaces would be provided within two subterranean levels beneath the proposed building. Three existing multi-family residential developments with a total of 112 residential units would be removed to accommodate the Project. Additionally, the Project includes the vacation and realignment of the portion of Bellwood Avenue that currently bifurcates the Project Site. The Project would comprise 241,754 square feet of floor area with a floor area ratio (FAR) of 2.66:1.

PREPARED FOR:
The City of Los Angeles
Department of City Planning

PREPARED BY:
Eyestone Environmental, LLC

APPLICANT:
SBLP Century City, LLC

June 2019

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1. INTRODUCTION

An application for the proposed Senior Residential Community at the Bellwood Project (Project) has been submitted to the City of Los Angeles Department of City Planning for discretionary review. The Department of City Planning, as Lead Agency, has determined that the project is subject to the California Environmental Quality Act (CEQA), and that the preparation of an Initial Study is required.

This Initial Study (IS) evaluates the potential environmental effects that could result from the construction, implementation, and operation of the proposed Project. This Initial Study has been prepared in accordance with CEQA (Public Resources Code Section 21000 et seq.), the State CEQA Guidelines (Title 14, California Code of Regulations, Section 15000 et seq.), and the City of Los Angeles CEQA Guidelines (1981, amended 2006). Based on the analysis provided within this Initial Study, the City has concluded that the Project may result in significant impacts on the environment and the preparation of an Environmental Impact Report (EIR) is required. This Initial Study (and the forthcoming EIR) are intended as informational documents, which are ultimately required to be considered and certified by the decision-making body of the City prior to approval of the Project.

1.1 PURPOSE OF AN INITIAL STUDY

The California Environmental Quality Act was enacted in 1970 with several basic purposes, including: (1) to inform governmental decision makers and the public about the potential significant environmental effects of proposed projects; (2) to identify ways that environmental damage can be avoided or significantly reduced; (3) to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of feasible alternatives or mitigation measures; and (4) to disclose to the public the reasons behind a project's approval even if significant environmental effects are anticipated.

An Initial Study is a preliminary analysis conducted by the Lead Agency, in consultation with other agencies (responsible or trustee agencies, as applicable), to determine whether there is substantial evidence that a project may have a significant effect on the environment. If the Initial Study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, the Lead Agency shall prepare a Negative Declaration. If the Initial Study identifies potentially significant effects but revisions have been made by or agreed to by the applicant that would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, a Mitigated Negative Declaration is appropriate. If the Initial Study concludes that neither a Negative Declaration or Mitigated Negative Declaration is appropriate, an EIR is normally required.[1]

---

[1] State CEQA Guidelines Section 15063(b)(1) identifies the following three options for the Lead Agency when there is substantial evidence that the project may cause a significant effect on the environment: "(A) Prepare an EIR, or (B) Use a previously prepared EIR which the Lead Agency determines would adequately analyze the project at hand, or (C) Determine, pursuant to a program EIR, tiering, or another appropriate process, which of a project's effects were adequately examined by an earlier EIR or negative declaration.

1.2 ORGANIZATION OF THE INITIAL STUDY

1. INTRODUCTION

Describes the purpose and content of the Initial Study and provides an overview of the CEQA

2. EXECUTIVE SUMMARY

Provides Project information, identifies key areas of environmental concern, and includes a determination whether the project may have a significant effect

3. PROJECT DESCRIPTION

Provides a description of the environmental setting and the Project, including project

4. EVALUATION OF ENVIRONMENTAL IMPACTS

Contains the completed Initial Study Checklist and discussion of the environmental factors that would be potentially affected by the Project.

1.3 CEQA PROCESS

In compliance with the State CEQA Guidelines, the City, as the Lead Agency for the Project, will provide opportunities for the public to participate in the environmental review process. As described below, throughout the CEQA process, an effort will be made to inform, contact, and solicit input on the Project from various government agencies and the general public, including stakeholders and other interested parties.

1.3.1 Initial Study

At the onset of the environmental review process, the City has prepared this Initial Study to determine if the proposed Project may have a significant effect on the environment. This Initial Study determined that the proposed Project may have a significant effect(s) on the environment and an EIR will be prepared.

A Notice of Preparation (NOP) is prepared to notify public agencies and the general public that the lead agency is starting the preparation of an EIR for the proposed project. The NOP and Initial Study are circulated for a 30-day review and comment period. During this review period, the lead agency requests comments from agencies and the public on the scope and content of the environmental information to be included in the EIR. After the close of the 30-day review and comment period, the lead agency continues the preparation of the Draft EIR and any associated technical studies, which may be expanded in consideration of the comments received on the NOP.

1.3.2 Draft EIR

Once the Draft EIR is complete, a Notice of Completion and Availability is prepared to inform public agencies and the general public of the availability of the document and the locations where the document can be reviewed. The Draft EIR and Notice of Availability are circulated for a 45-day review and comment period. The purpose of this review and comment period is to provide public agencies and the general public an opportunity to review the Draft EIR and comment on the adequacy of the document, including the analysis of environmental effects, the mitigation measures presented to reduce potentially significant impacts, and the alternatives analysis. After the close of the 45-day review and comment period, responses to all comments on environmental issues are prepared.

1.3.3 Final EIR

The lead agency prepares a Final EIR, which incorporates the Draft EIR or a revision to the Draft EIR, comments received on the Draft EIR and list of commenters, and responses to significant environmental points raised in the review and consultation process.

The decision-making body then considers the Final EIR, together with any comments received during the public review process, and may certify the Final EIR and approve the project. In addition, when approving a project for which an EIR has been prepared, the lead agency must prepare findings for each significant effect identified, a statement of overriding considerations if there are significant impacts that cannot be mitigated, and a mitigation monitoring and reporting program to ensure that all proposed mitigation measures are implemented.

If the Project is approved, then within five days of the action, the City files a Notice of Determination with the County Clerk. The Notice of Determination is posted by the County Clerk within 24 hours of receipt. This begins a 30-day statute of limitations on legal challenges to the approval under CEQA. The ability to challenge the approval in court may be limited to those persons who objected to the approval of the project, and to issues that were presented to the Lead Agency by any person, either orally or in writing, during the public comment period.

2. EXECUTIVE SUMMARY

PROJECT TITLE	**SENIOR RESIDENTIAL COMMUNITY AT THE BELLWOOD**
ENVIRONMENTAL CASE NO.	ENV-2018-7182-EIR
RELATED CASES	ZA-2018-7183-ELD-SPR; VTT-82442

PROJECT LOCATION	**10328–10384 AND 10341–10381 BELLWOOD AVENUE, LOS ANGELES, CA 90064**
COMMUNITY PLAN AREA	WEST LOS ANGELES
GENERAL PLAN DESIGNATION	NEIGHBORHOOD COMMERCIAL
ZONING	R3-1-O (MULTIPLE RESIDENTIAL, HEIGHT DISTRICT 1, OIL DRILLING) AND C2-1VL-O (COMMERCIAL, HEIGHT DISTRICT 1VL, OIL DRILLING)
COUNCIL DISTRICT	5—KORETZ

LEAD CITY AGENCY	**CITY OF LOS ANGELES DEPARTMENT OF CITY PLANNING**
STAFF CONTACT	ADAM VILLANI
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APPLICANT	**SBLP CENTURY CITY, LLC**
ADDRESS	4514 COLE AVENUE, SUITE 1500, DALLAS, TX 75205
PHONE NUMBER	(214) 370-2650

PROJECT DESCRIPTION

The Project proposes the development of a new eldercare facility for persons 62 years of age and older on a 2.22-acre (96,792 square feet) site located at 10328-10384 and 10341-10381 Bellwood Avenue (Project Site) in the West Los Angeles Community Plan area of the City of Los Angeles (City). The Project Site includes the portion of Bellwood Avenue that bifurcates the Project Site. The Project would include 192 senior housing residential units, comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms, 50,463 square feet of indoor common

areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area, and 14,630 square feet of outdoor common areas, including several courtyards and terraces that would be distributed throughout the Project Site. The proposed uses would be located within a single building ranging in height from 38 feet to 70 feet, or three to six stories. A total of 140 vehicle parking spaces would be provided within two subterranean levels beneath the proposed building. Three existing multi-family residential developments with a total of 112 residential units would be removed to accommodate the Project. Additionally, the Project includes the vacation and realignment of the portion of Bellwood Avenue that currently bifurcates the Project Site. The Project would comprise 241,754 square feet of floor area with a floor area ratio (FAR) of 2.66:1.

(For additional detail, see "Section 3. PROJECT DESCRIPTION").

ENVIRONMENTAL SETTING

The Project Site is located within the West Los Angeles Community Plan area of the City of Los Angeles. The Project Site is irregularly shaped and bifurcated by Bellwood Avenue. Adjacent to the Project Site, Bellwood Avenue is a u-shaped street that connects to Olympic Boulevard at each end. The Project Site includes parcels located generally north and east/south of Bellwood Avenue as well as the portion of Bellwood Avenue that bifurcates the Project Site. The portion of the Project Site located generally north of Bellwood Avenue is bounded by the Century Park hotel to the north, Bellwood Avenue and multi-family residential uses to the east and south, and a small commercial shopping center to the west. The portion of the Project Site located east and south of Bellwood Avenue is generally bounded by a Courtyard by Marriott hotel and Bellwood Avenue to the north, single-family residential uses to the east and south, and a beauty salon to the west. Primary regional access is provided by the California State Route 2 (CA-2), the Santa Monica Freeway (I-10), and the San Diego Freeway (I-405), which are all accessible within 2 miles of the Project Site. Major arterials providing regional access to the Project Site include Olympic Boulevard, Beverly Glen Boulevard, and Pico Boulevard. The Project Site vicinity is developed primarily with a mix of commercial and residential uses.

(For additional detail, see "Section 3. PROJECT DESCRIPTION").

OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED

(e.g., permits, financing approval, or participation agreement)

None.

CALIFORNIA NATIVE AMERICAN CONSULTATION

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

No; consultation has not yet commenced.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code Section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code Section 21082.3(c) contains provisions specific to confidentiality.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☒ Aesthetics	☒ Greenhouse Gas Emissions	☒ Public Services
☐ Agriculture & Forestry Resources	☐ Hazards & Hazardous Materials	☐ Recreation
☒ Air Quality	☐ Hydrology/Water Quality	☒ Transportation
☐ Biological Resources	☒ Land Use/Planning	☒ Tribal Cultural Resources
☐ Cultural Resources	☐ Mineral Resources	☒ Utilities/Service Systems
☒ Energy	☒ Noise	☐ Wildfire
☐ Geology/Soils	☒ Population/Housing	☒ Mandatory Findings of Significance

DETERMINATION

(To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions on the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☒ I find the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Adam Villani	City Planner
PRINTED NAME	**TITLE**
	June 7, 2019
SIGNATURE	**DATE**

EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less that significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of a mitigation measure has reduced an effect from "Potentially Significant Impact" to "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analysis," as described in (5) below, may be cross referenced).

5) Earlier analysis must be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR, or negative declaration. Section 15063 (c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less Than Significant With Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated

7) Supporting Information Sources: A sources list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whichever format is selected.

9) The explanation of each issue should identify:

   a) The significance criteria or threshold, if any, used to evaluate each question; and

   b) The mitigation measure identified, if any, to reduce the impact to less than significance.

3. PROJECT DESCRIPTION

3.1 PROJECT SUMMARY

The Senior Residential Community at The Bellwood (Project) would provide for the development of a new eldercare facility for persons 62 years of age and older on a 2.22-acre (96,792 square feet) site located at 10328–10384 and 10341–10381 Bellwood Avenue (Project Site) in the West Los Angeles Community Plan area of the City of Los Angeles (City). The Project Site includes the portion of Bellwood Avenue that bifurcates the Project Site. The Project would include 192 senior housing residential units, comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms; 50,463 square feet of indoor common areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area; and 14,630 square feet of outdoor common areas, including several courtyards and terraces that would be distributed throughout the Project Site. The proposed uses would be located within a single building ranging in height from 38 feet to 70 feet, or three- to six stories. A total of 140 vehicle parking spaces would be provided within two subterranean levels beneath the proposed building. Three existing multi-family residential developments with a total of 112 residential units and 43,939 square feet would be removed to accommodate the Project. Additionally, the Project includes the vacation and realignment of the portion of Bellwood Avenue that currently bifurcates the Project Site. The Project would comprise 241,754 square feet of floor area with a floor area ratio (FAR) of 2.66:1.

3.2 ENVIRONMENTAL SETTING

3.2.1 Project Location

The Project Site is located at 10328–10384 and 10341–10381 Bellwood Avenue within the West Los Angeles Community Plan area of the City. As shown in Figure 1 on page 10, the Project Site is irregularly shaped and is bifurcated by Bellwood Avenue. Adjacent to the Project Site, Bellwood Avenue is a u-shaped street that connects to Olympic Boulevard at each end. The Project Site includes parcels located generally north/west and east/south of Bellwood Avenue as well as the portion of Bellwood Avenue that bifurcates the Project Site. The portion of the Project Site located generally north/west of Bellwood Avenue is bounded by the Century Park hotel to the north, Bellwood Avenue and multi-family residential uses to the east and south, and a small commercial shopping center to the west that includes a cleaners and a smog check station. The portion of the Project Site located east and south of Bellwood Avenue is generally bounded by a Courtyard by Marriott hotel and Bellwood Avenue to the north, single-family residential uses to the east and south, and a beauty salon to the west. Along the southern and eastern boundaries of the Project Site there is a grade difference ranging between approximately 14 feet to 42 feet from the adjacent single-family residential uses such that the Project Site is situated below the adjacent single-family residential uses. This sloping topography continues across the Project Site and surroundings towards Olympic Boulevard.

Figure A-1

Project Location Map

Source: Google Maps, 2018.

3.2.2 Existing Conditions

As shown in Figure 2 on page 12, the Project Site is currently developed with several multi-family residential buildings and associated structures and parking and includes the portion of Bellwood Avenue that bifurcates the Project Site. Specifically, the Project Site encompasses three multi-family residential developments totaling 112 units and 43,939 square feet. These three multi-family residential developments include a two-story, 13-unit building located at 10341–10381 Bellwood Avenue; seven, two-story buildings with a total of 55 units located at 10328-10366 Bellwood Avenue; and six bungalow court buildings located at 10368-10384 Bellwood Avenue with a total of 44 units. Access to each of the multi-family residential developments is currently available via several driveways along Bellwood Avenue. Existing landscaping within the Project Site includes several shrubs and trees.

The Project Site is located within the West Los Angeles Community Plan area. The Project Site, which is comprised of 13 lots (including nine contiguous lots along the southerly side of Bellwood Avenue and four contiguous lots along the northerly side), has a Neighborhood Commercial General Plan land use designation and is zoned R3-1-O (Multiple Residential, Height District 1, Oil Drilling)[2] and C2-1VL-O (Commercial, Height 1VL, Oil Drilling).[3] The R3 designation permits a wide variety of residential uses, including group dwellings, multiple dwellings, apartment houses, boarding houses, rooming houses, accessory uses and home occupations, senior independent housing, and assisted living care housing. The C2 designation permits a wide variety of uses, including, but not limited to, various retail and restaurant spaces, auditoriums, automotive fueling and service stations, churches, drive-in businesses, hospitals, sanitariums, clinics, and schools. Height District 1 within the R3 Zone limits the height to 45 feet and the FAR to 3:1. Height District 1VL within the C2 Zone limits the height to 45 feet and two stories (except that there is no restriction on the number of stories for buildings used entirely for residential purposes) and the FAR to 1.5:1. The "O" designation indicates the Project Site is located within an Oil Drilling District where the drilling of oil wells or the production from the wells of oil, gases, or other hydrocarbon substances is permitted. The Project Site is also located within the West Los Angeles Transportation Improvement and Mitigation Specific Plan Area.

3.2.3 Surrounding Land Uses

As previously described, the Project Site includes parcels located generally north/west and east/south of Bellwood Avenue. The portion of the Project Site located generally north/west of Bellwood Avenue is bounded by the Century Park hotel to the north, Bellwood Avenue and multi-family residential uses to the east and south, and a small commercial shopping center to the west that includes a cleaners and a smog check station. The portion of the Project Site located east and south of Bellwood Avenue is generally bounded by a Courtyard by Marriott hotel and Bellwood Avenue to the north, single-family residential uses to the east and south, and a beauty salon to the west. Beyond the immediate surroundings of the Project Site are additional commercial and office uses along Olympic Boulevard, including a Ralph's grocery store located to the north and a Goodwill Donation Center to the west. Single- and multi-family residential uses continue east and south of the Project Site. Additionally, the Project Site is located 0.5 mile south of the Century City commercial district.

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[2] The R3 zoning applies to Lots 29-35 of Block 13 of Tract 7260.

[3] The C2 zoning applies to Lots 36-37 of Block 13 of Tract 7260 and Lots 10-13 of Block 14 of Tract 7260.

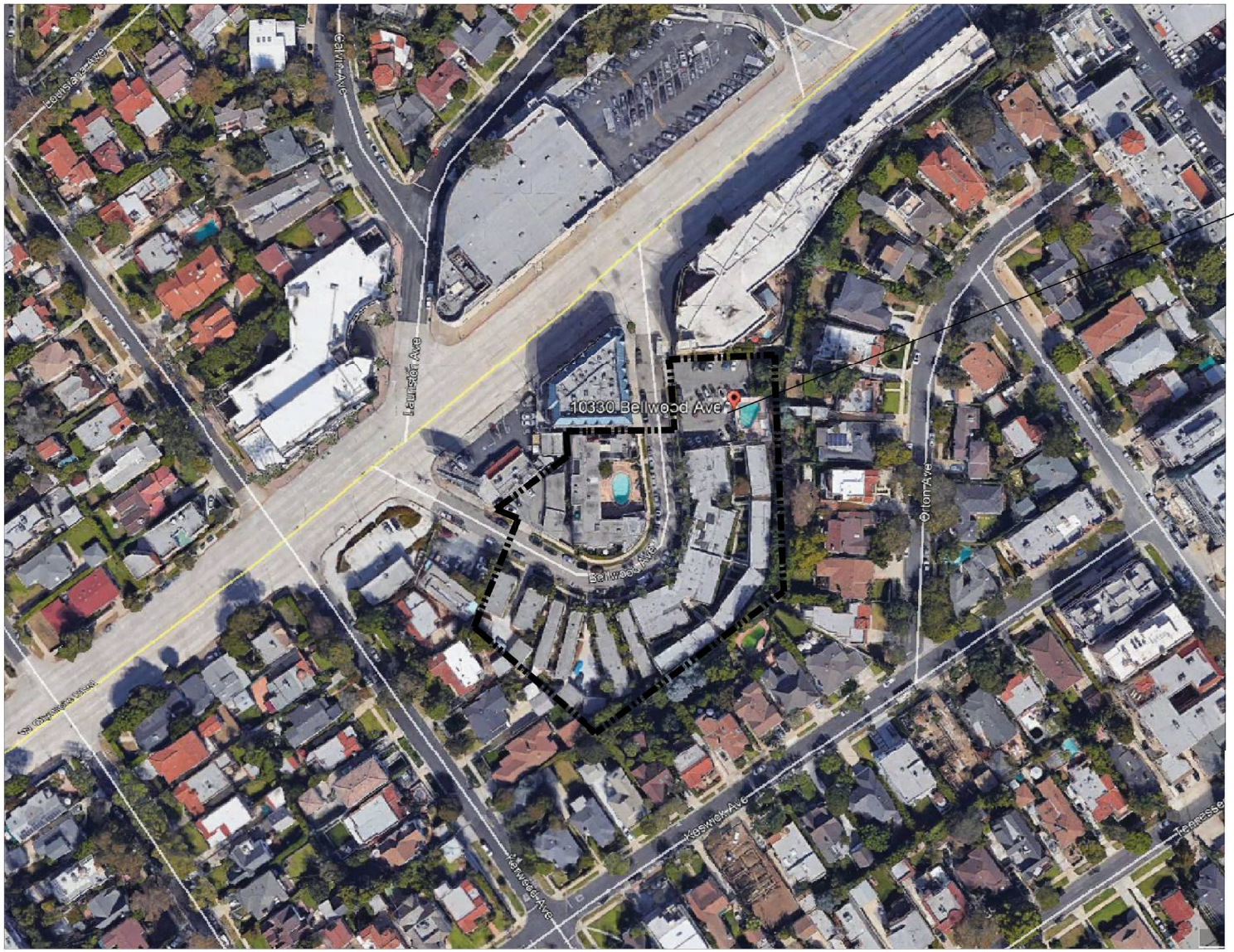


Figure A-2
Aerial Photograph of the Project Vicinity

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

Primary regional access is provided by California State Route 2 (CA-2), the Santa Monica Freeway (I-10), and the San Diego Freeway (I-405), which are all accessible within 2 miles of the Project Site. Major arterials providing regional access to the Project Site include Olympic Boulevard, Beverly Glen Boulevard, and Pico Boulevard. Public transit service in the vicinity of the Project Site includes Santa Monica Big Blue Bus Lines 3 and 5 with bus stops located along Olympic Boulevard, near Kerwood Avenue and at Century Park West.

3.3 DESCRIPTION OF PROJECT

3.3.1 Project Overview

The Project proposes the development of an eldercare facility consisting of 192 senior housing residential units comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms; 50,463 square feet of indoor common areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area; and 14,630 square feet of outdoor common areas, including several courtyards and terraces that would be distributed throughout the Project Site. The proposed uses would be located within a single building ranging in height from 38 feet to 70 feet, or three- to six stories. A total of 140 vehicle parking spaces would be provided within two subterranean levels beneath the proposed building. Three existing multi-family residential developments with a total of 112 residential units and 43,939 square feet would be removed to accommodate the Project. Additionally, as part of the Project, the portion of Bellwood Avenue that bifurcates the Project Site would be vacated and realigned as a private street, with through access maintained from both sides of Bellwood Avenue. The Project would comprise 241,754 square feet of floor area with a floor area ratio (FAR) of 2.66:1. A Conceptual Site Plan and Conceptual Floor Plans are provided in Figure 3 through Figure 11 on pages 14 through 22.

The Project would provide services and assistance for the daily living needs of its residents. Assistance and activities provided on-site would include laundry, housekeeping, exercise and fitness classes, art and recreational classes, social events, and service of three meals per day in common dining rooms. A shuttle service would be provided by staff for local trips to shopping and services.

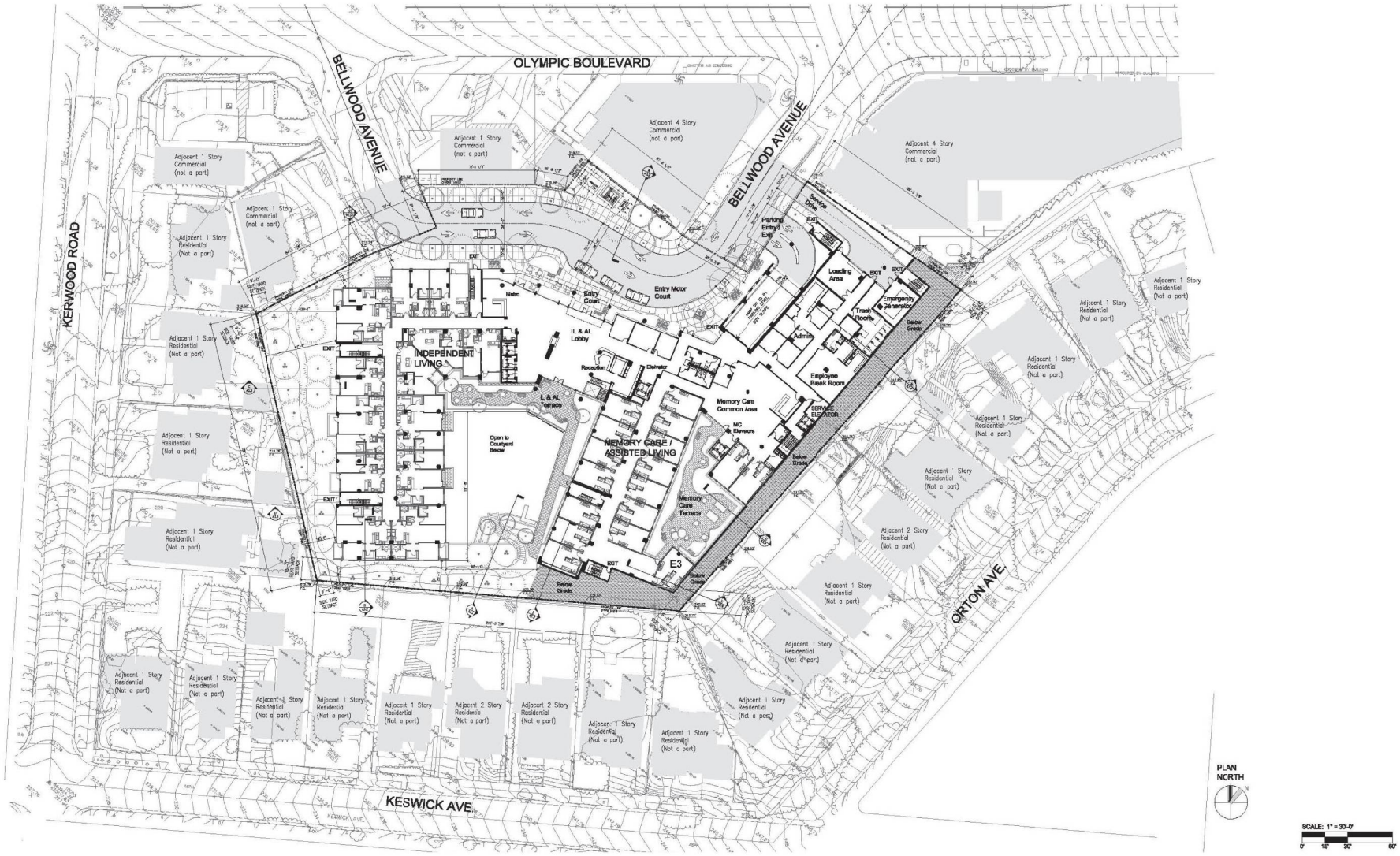
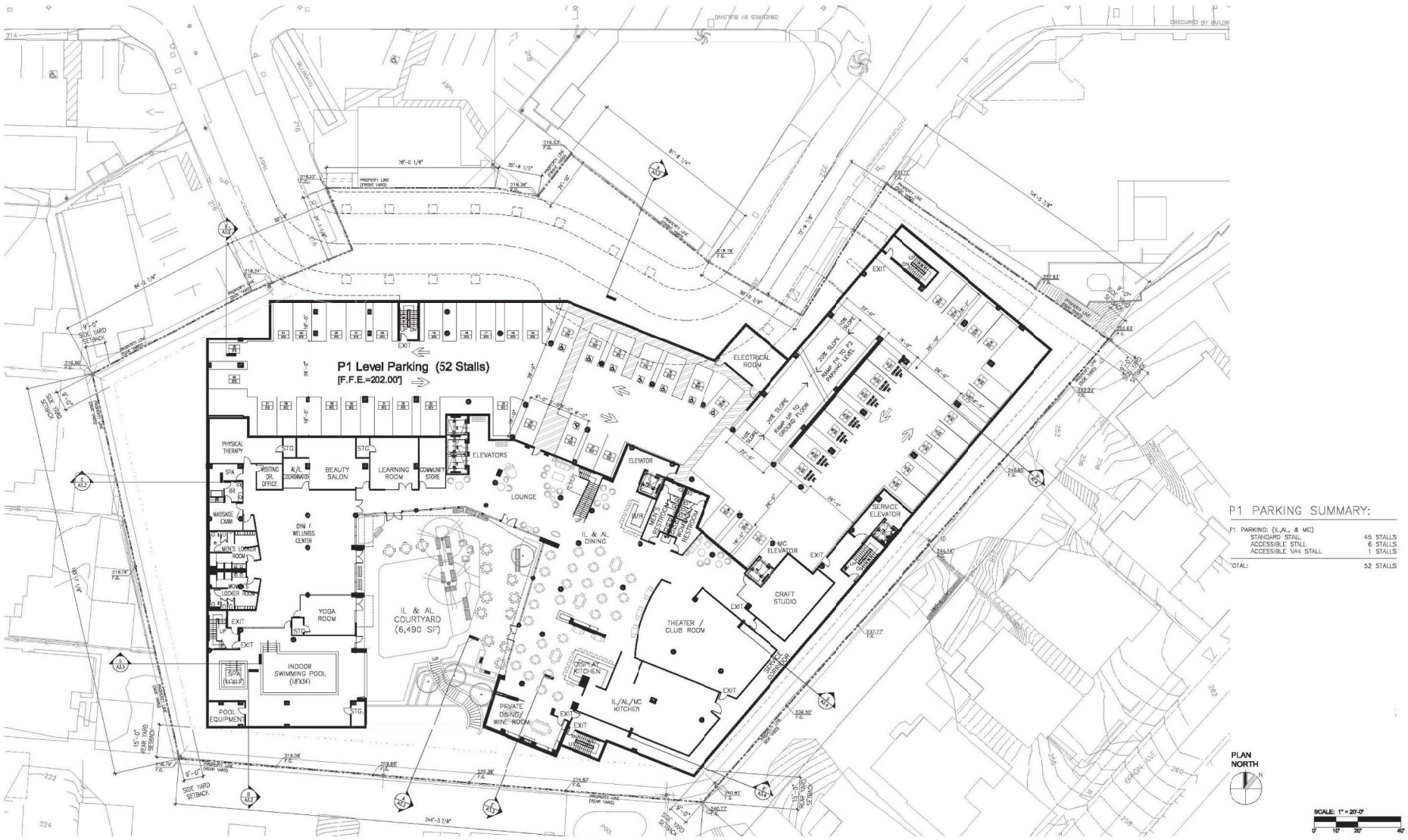


Figure A-3
Conceptual Site Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.



P1 PARKING SUMMARY:

P1 PARKING: (IL,AL, & MC)	
STANDARD STALL	45 STALLS
ACCESSIBLE STALL	6 STALLS
ACCESSIBLE VAN STALL	1 STALLS
TOTAL:	52 STALLS

Figure A-4

P1 Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

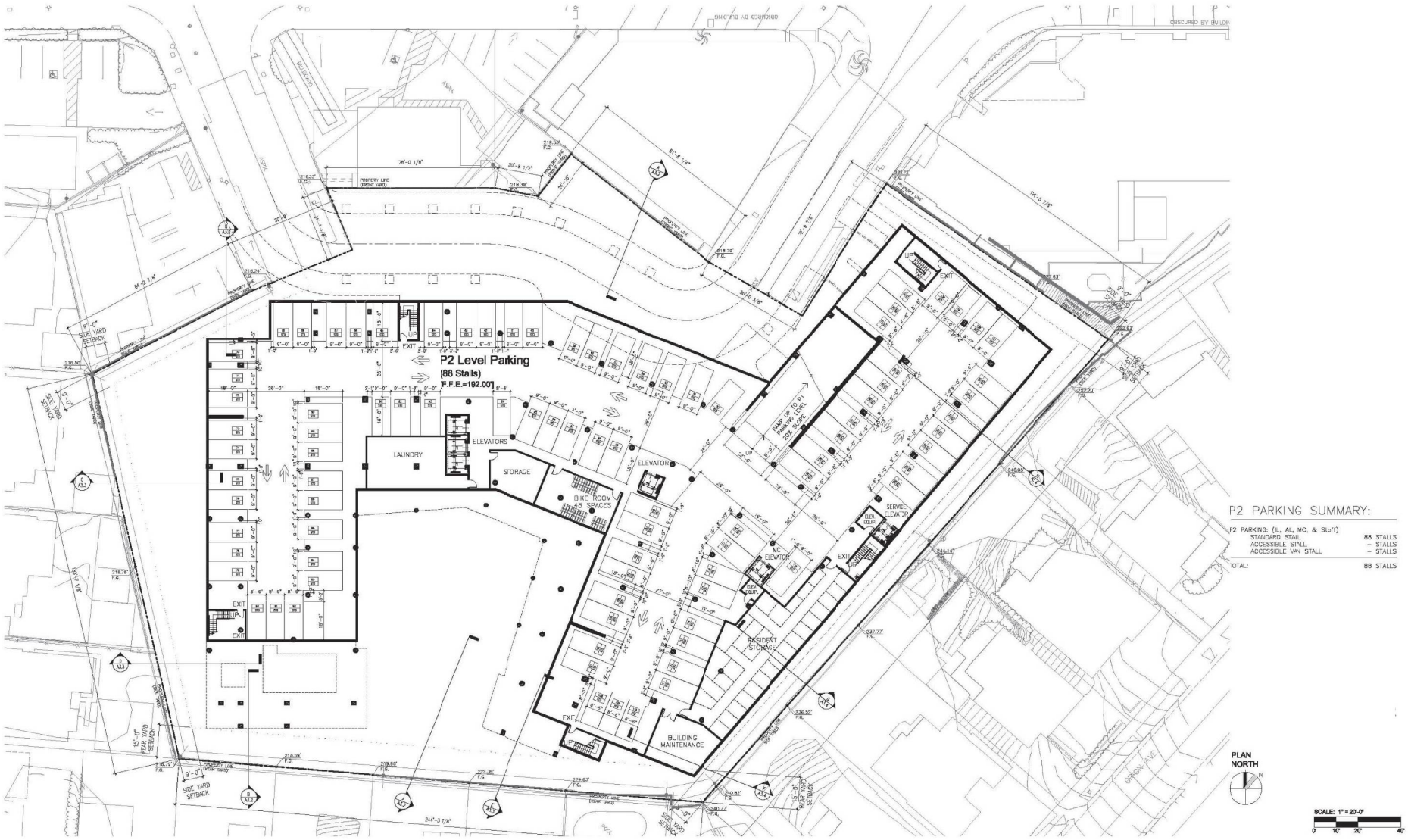


Figure A-5
P2 Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

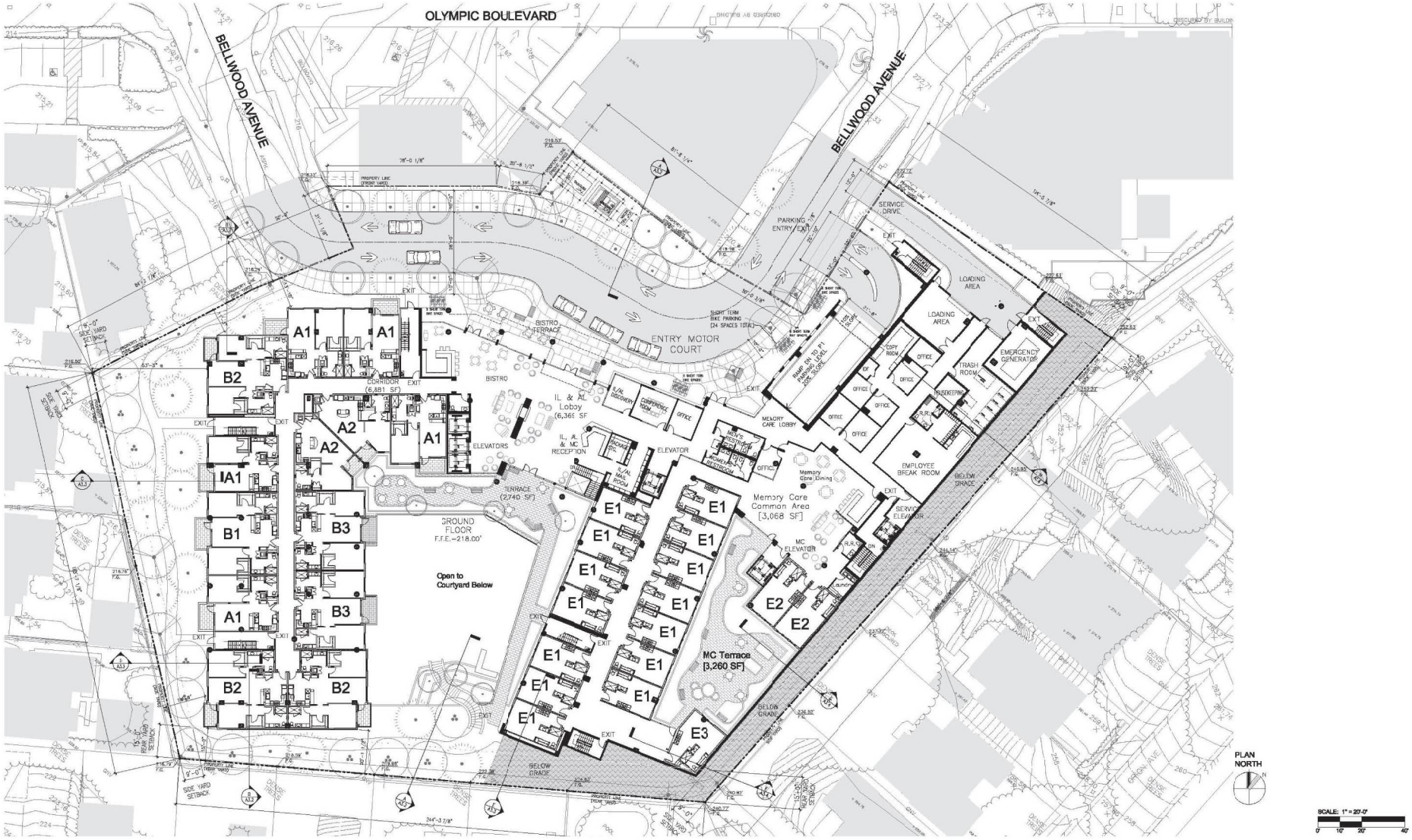


Figure A-6
Ground Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

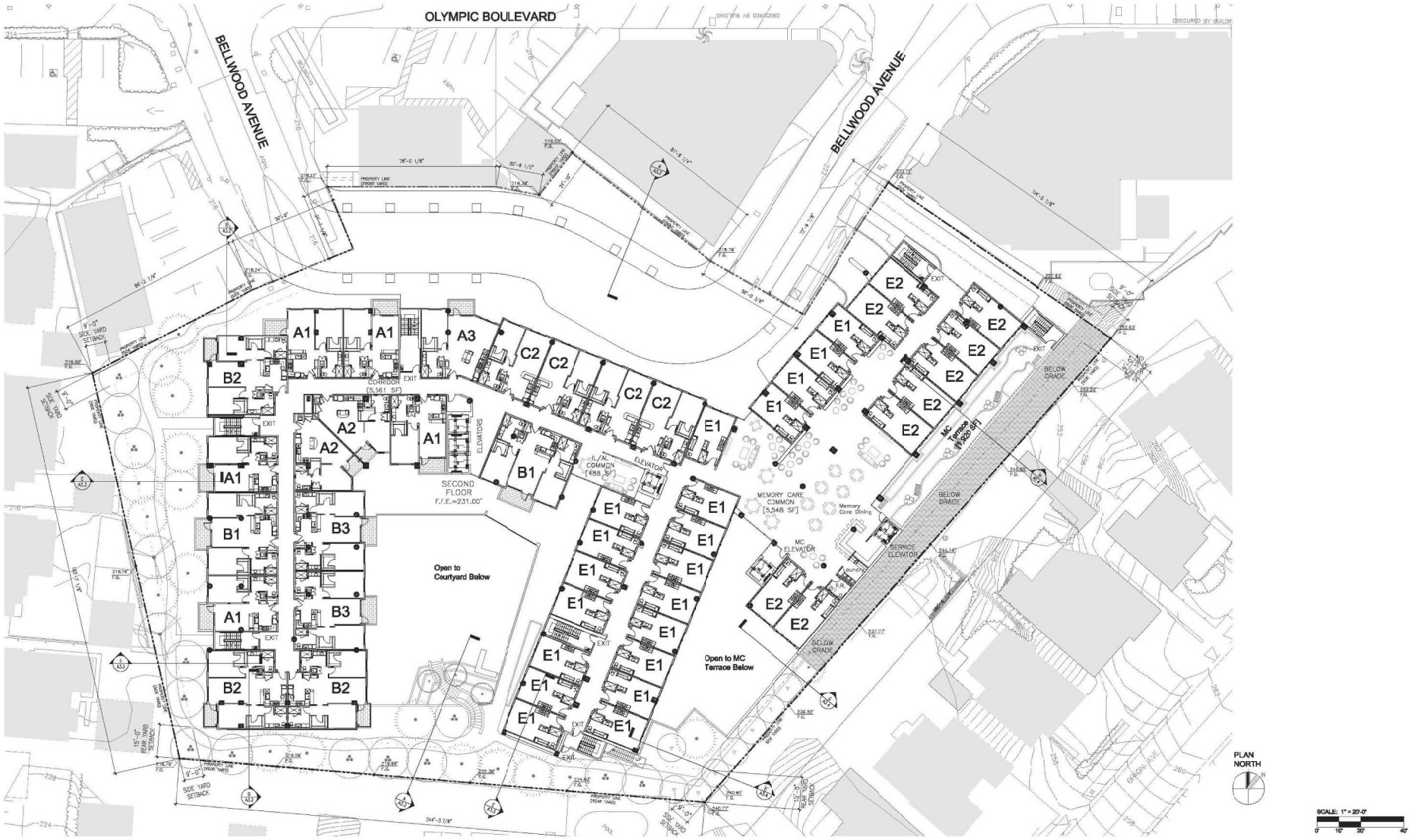


Figure A-7
Second Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

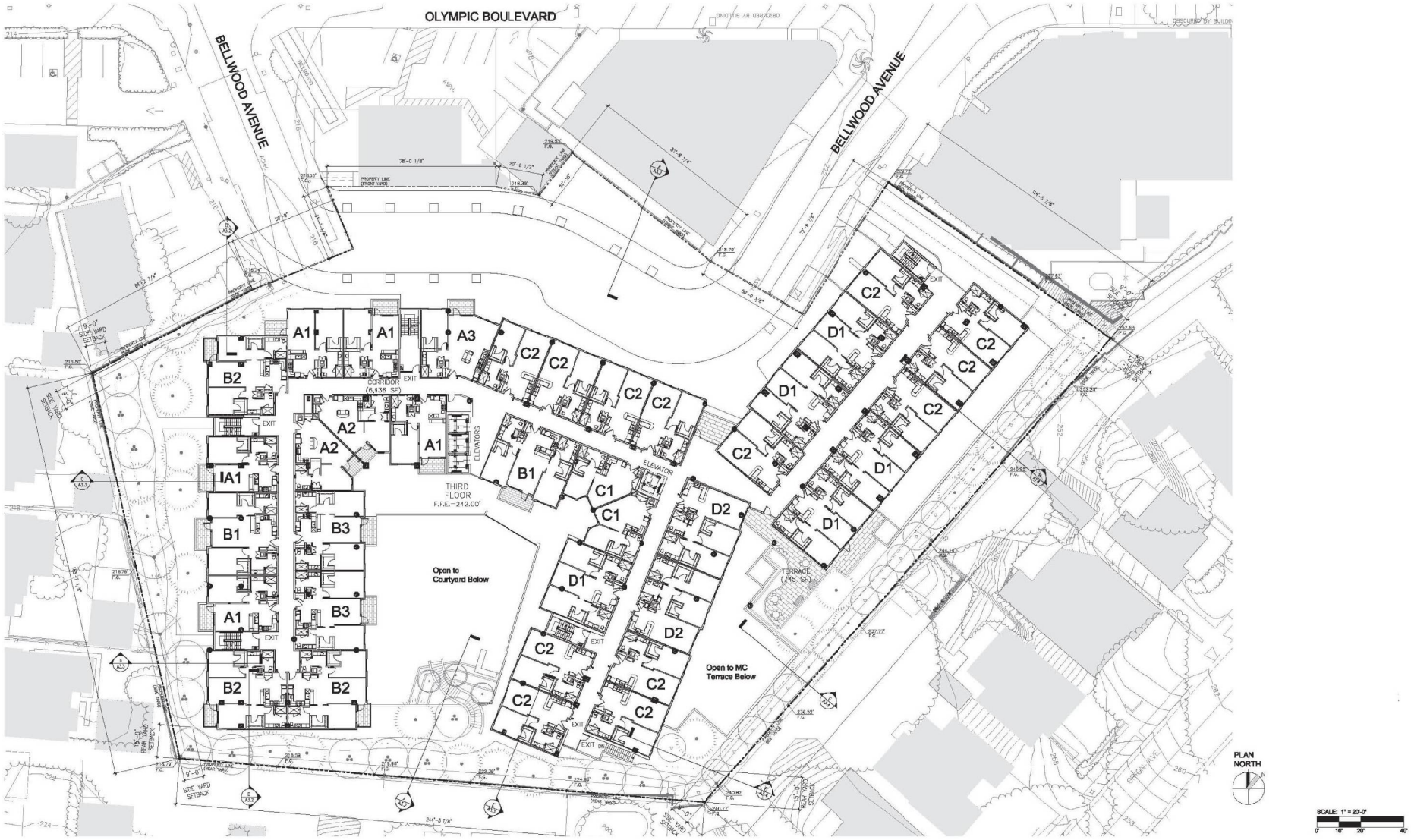


Figure A-8
Third Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

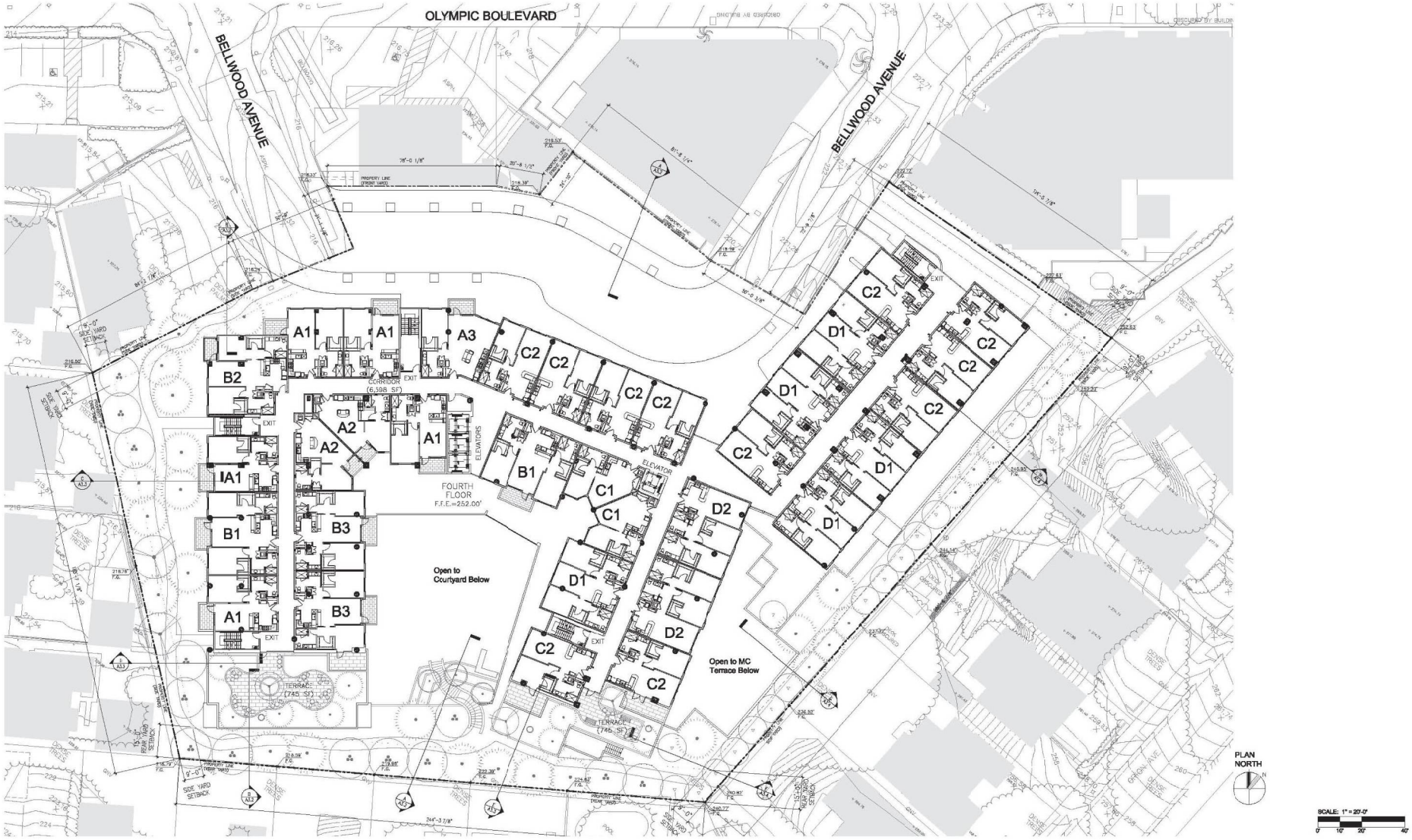


Figure A-9
Fourth Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

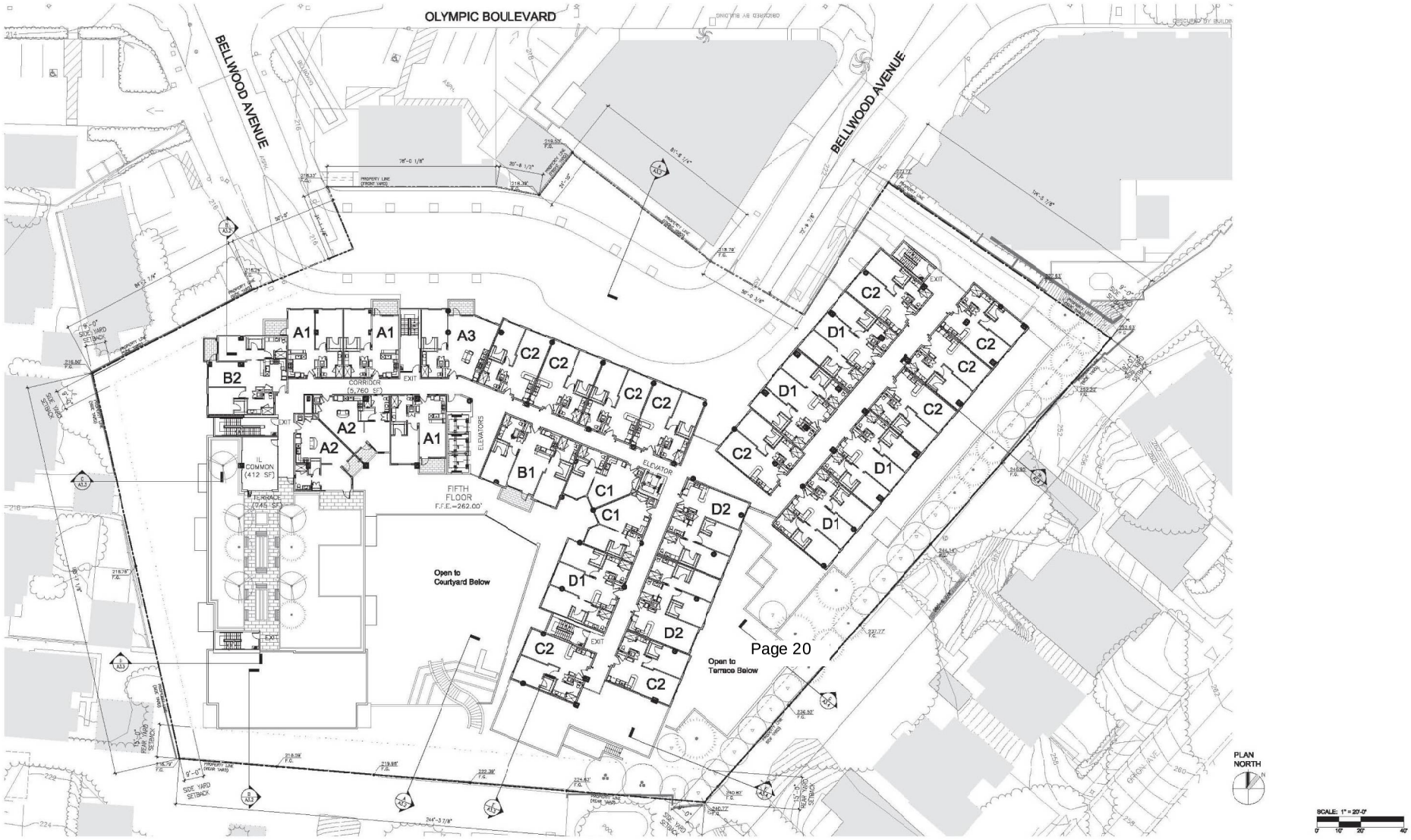


Figure A-10
Fifth Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

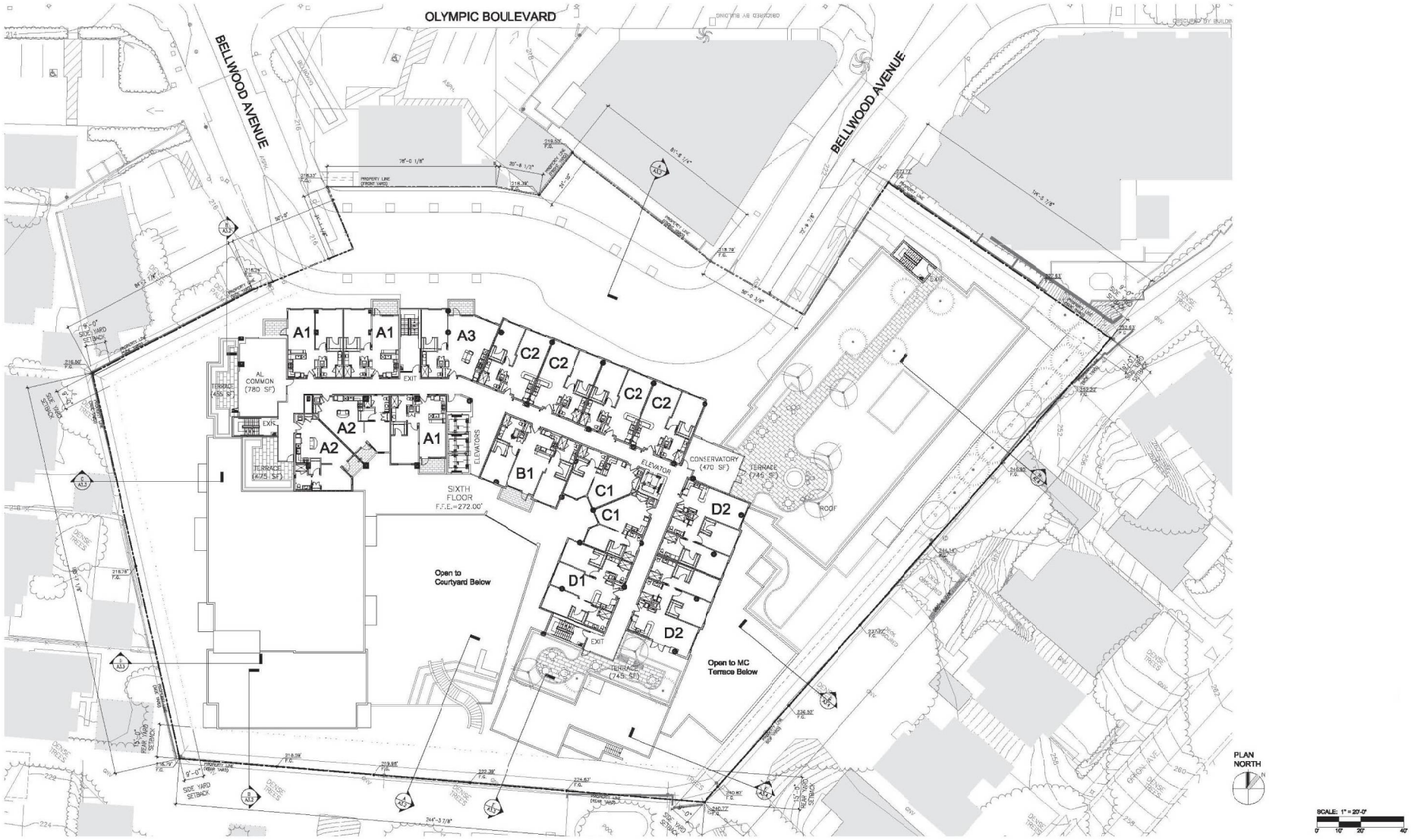


Figure A-11
Sixth Floor Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

3.3.2 Design and Architecture

As shown in the Conceptual Site Plan provided in Figure 3 on page 14, the proposed building would be constructed around a central courtyard that would be open to the sky through the extent of the building. The assisted living guest rooms and memory care units would be generally concentrated within the eastern portion of the building, east of the courtyard; and the independent living units would be generally concentrated within the western portion of the building, to the west of the courtyard. As summarized in Table 1 on page 24, the proposed 71 dwelling units dedicated to independent living would consist of 43 one- and 28 two-bedroom units that range in size from approximately 776 square feet to 1,216 square feet. Each of the independent living units would include a private outdoor terrace, a full kitchen, and in-unit washer/dryer. The independent living dwelling units would be located on the first through sixth floors generally within the west and central portions of the building. The proposed 75 guest rooms dedicated to assisted living would consist of 51 one- and 24 two-bedroom units that range in size from approximately 684 square feet to 1,212 square feet. Each of the assisted living guest rooms would include a sitting or living room area and a built-in cabinet with sink. The assisted living guest rooms would be located on the second through sixth floors generally within the central and east portions of the building. The 46 memory care guest rooms would be studio units ranging in size from approximately 404 to 460 square feet. Each of the memory care guest rooms would include private bedrooms with a private bathroom and a built-in cabinet with sink and under counter refrigerator. Some guest rooms may include a small seating area. The memory care guest rooms would be located on the first and second floors within the eastern portion of the building and would be separated from the independent living and assisted living components.

As illustrated in Figure 4 on page 15, many of the indoor common areas, including dining rooms, the gym, indoor pool and spa, wellness center, and several activity rooms would be located on the first subterranean level (P1). Level P1 would be open to the central courtyard such that the common indoor areas located within this level would have direct access to the central outdoor courtyard. These common areas would be separate from the parking area, and visitors who would park at the P1 level would not have direct access to the central courtyard or common areas. Stairs and elevators would be available from Level P1 to access the ground level above.

As shown in Figure 6 on page 17, the ground floor level (first floor) of the proposed building would serve as the primary entrance to the building. Specifically, the ground floor level would include: two separate lobbies to support independent living/assisted living and memory care services, respectively; a conference room, staff offices, and other service and support areas; and a lobby bistro area and a bistro terrace with outdoor seating, located adjacent to the independent living/assisted living lobby. The ground floor level within the eastern portion of the building would also include: a memory care common area, dining area, and a memory care outdoor terrace with a portion of the memory care guest rooms oriented around these uses. As depicted in Figure 6, independent living dwelling units would also be provided at the ground floor level of the western portion of the building along with an outdoor landscaped terrace for use by the independent living/assisted living residents. As illustrated in Figure 7 through Figure 11 on pages 18 through 22, the remainder of the independent living units, assisted living guest rooms, and memory care guest rooms would be provided on the second through sixth floors with additional common areas and terraces. Specifically, as shown in Figure 7, an additional memory care common area and dining area along with the remaining memory care guest rooms would be provided on the second floor. In addition, the second floor would include independent living units and assisted living guest rooms. The third through sixth floors would include the remaining independent living units and assisted living guest rooms along with additional terraces.

Table 1
Summary of Proposed Senior Housing Residential Units

Unit Type	Independent Living	Assisted Living	Memory Care
Studio	0	0	46
One-Bedroom	43	51	0
Two-Bedroom	28	24	0
Total	**71**	**75**	**46**

sf = square feet

Source: Eyestone Environmental, 2019.

Overall, the Project would feature a contemporary architectural style and would be designed to create a visually unified site with a new building designed to complement the existing surrounding uses and respond to the low- to mid-scale character of the surrounding area. The proposed building would include building fenestration, a variety of surface materials, and a stepped design to create horizontal and vertical articulation, provide visual interest, and maintain the existing scale in the vicinity of the Project Site. In particular, building scale and massing is defined by varying massing and height components that break up the façade into distinct and offset planes. Building materials would include smooth troweled stucco, composite metal wall panels with wood finish, limestone panels and glass.

3.3.3 Open Space and Landscaping

As shown in Figure 12 on page 25, the various components and levels of the proposed building would be integrated by a series of landscaped courtyards and terraces provided at every floor of the building. Specifically, as illustrated in Figure 13 on page 26, Level P1 would include a central courtyard that would be open to the sky and include an outdoor kitchenette and barbecue stations, exercise lawn, garden seating area, flexible lounge seating, and outdoor dining seating. As provided in Figure 14 on page 27, additional terraces would be provided at the ground floor, including a large ground level terrace, the memory care terrace, and the bistro terrace. The ground level terrace would include bench and table seating, raised planters, and bistro tables. The memory care terrace would feature a lawn, raised vegetable planters, bench and table seating, and raised planters. The bistro terrace would include bistro tables. As shown in Figure 14, additional benches and table seating would be provided at the entry plaza along Bellwood Avenue. Extensive landscaping that would serve as screening along the perimeter of the Project Site would also be provided at the ground level. As depicted in Figure 15 on page 28, additional terraces would be provided on levels two through six. On the second floor, an additional terrace would be provided that would include raised vegetable planters, benches and table seating, raised planters, and bistro tables. A smaller terrace would be provided on the third floor that would offer benches and table seating and bistro tables. Two larger terraces would be included on the fourth floor that would provide raised water features, benches and table seating, raised planters, and bistro tables. As illustrated in Figure 15, additional landscaped terraces would be provided on the fifth and sixth levels that include raised water features, benches and table seating, raised planters, and bistro tables. Overall, the Project would provide 14,630 square feet of open space and would exceed the LAMC required open space of 7,800 square feet.

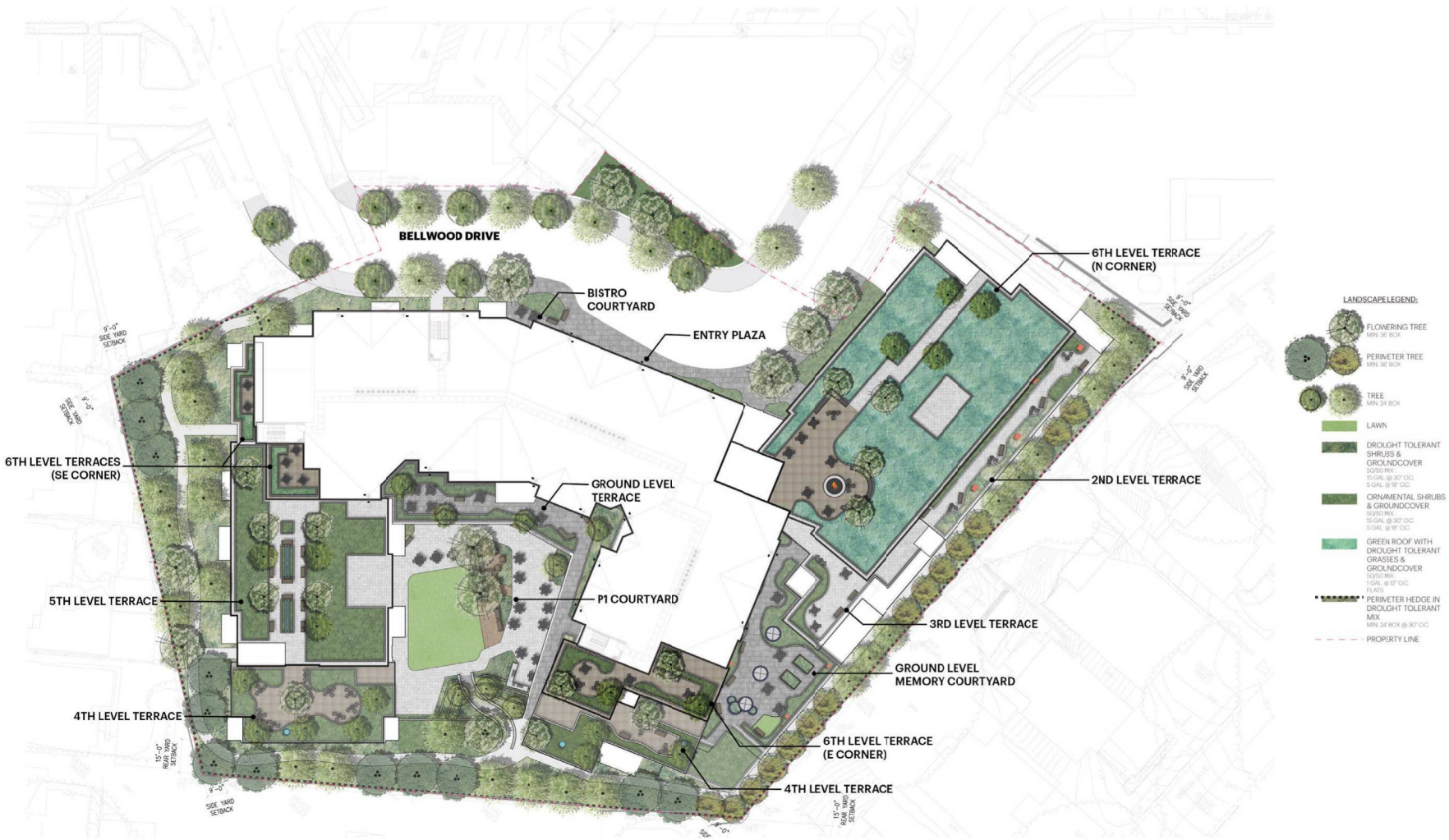


Figure A-12
Conceptual Landscape Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

Figure A-13

P1 Landscape Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

Figure A-14

Ground Floor Landscape Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

Figure A-15

Second to Sixth Floor Landscape Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.

3.3.4 Access, Circulation, and Parking

Vehicular access would continue to be provided along Bellwood Avenue from Olympic Boulevard. However, as part of the Project, the portion of Bellwood Avenue that bifurcates the Project Site would be vacated and realigned as a private street. Through public access would be maintained from both sides of Bellwood Avenue, and a vehicle turn-out adjacent to the building's lobby entrance would be provided along with sidewalk and streetscape improvements. Access to the subterranean parking would occur from one entry/exit driveway located along Bellwood Avenue near the northern boundary of the building, as shown in Figure 3 on page 14. Access for trash pickup and other freight vehicles would be provided via a service driveway located adjacent to the parking entry/exit driveway along Bellwood Avenue. Pedestrian access to the building would also be provided along Bellwood Avenue.

Based on the proposed land uses, the Project would be required to provide 81 vehicle parking spaces and 72 bicycle parking spaces (24 short term spaces and 48 long term spaces). The Project would provide 140 vehicle parking spaces, which would exceed LAMC requirements, and 72 bicycle parking spaces, which would meet LAMC requirements. These parking spaces would be located within two subterranean parking levels that would extend to a depth of 30 feet. The Project also would comply with City requirements for providing electric vehicle charging capabilities and electric vehicle charging stations within the proposed parking area.

3.3.5 Lighting and Signage

Exterior lighting along the public areas would include pedestrian-scale (i.e., lower to the ground, spaced closer together) fixtures. Exterior lighting would incorporate low-level exterior lights on the building and along pathways for security and wayfinding purposes. In addition, low-level lighting to accent signage, architectural features, and landscaping elements would be incorporated throughout the Project Site. Project lighting would be designed to minimize light trespass from the Project Site and would comply with all LAMC requirements. Night lighting at the Project Site would be low profile and at the necessary intensity to provide a safe walkable environment along walking paths. Roof terrace lighting would be of similar light levels, directed downward towards walkable surfaces, and shielded from view of the adjacent residential neighbors. All new street and pedestrian lighting within the public right-of-way would comply with applicable City regulations and would require approval from the Bureau of Street Lighting in order to maintain appropriate and safe lighting levels on sidewalks and roadways while minimizing light and glare on adjacent properties.

Proposed signage would be designed to be aesthetically compatible with the proposed architecture of the building and with the requirements of the LAMC. Proposed signage would include mounted project identity signage and general wayfinding pedestrian signage. Wayfinding signs would be located at parking garage entrances, elevator lobbies, vestibules, and residential corridors.

3.3.6 Site Security

During construction of the Project, temporary security measures including security fencing, lighting, and locked entry would be implemented to ensure security of the Project Site. The following security features would also be incorporated in the Project design to enhance on-site safety:

- Design lobby areas to be visible from the public streets or entry ways.

- Design building entrances and exits, spaces around the building, and pedestrian walkways to be open and in view of surrounding sites.
- Design public spaces to be easily patrolled and accessed by safety personnel.
- Provide sufficient lighting of building entries and walkways to facilitate pedestrian orientation and clearly identify a secure route between parking areas and points of entry into the building.
- Provide sufficient lighting of parking areas, elevators, and lobbies to maximize visibility and reduce areas of concealment.
- Provide gated access to parking facilities.
- Provide panic buttons within the parking facilities and parking area elevators.
- Include access controls in the form of private on-site security, a closed circuit security camera system, and keycard entry for the building and parking areas.
- Provide 24-hour security to monitor entrances and exits and manage and monitor the fire/life/safety systems.
- Display contact information for on-site security staff prominently throughout the Project Site.

3.3.7 Sustainability Features

The Project has been designed and would be constructed to incorporate environmentally sustainable building features and construction protocols required by the Los Angeles Green Building Code and CALGreen. These standards would reduce energy and water usage and waste and, thereby, reduce associated greenhouse gas emissions and help minimize the impact on natural resources and infrastructure. The sustainability features to be incorporated into the Project would include, but would not be limited to WaterSense-labeled plumbing fixtures and weather-based controller and drip irrigation systems to promote a reduction of indoor and outdoor water use; Energy Star–labeled appliances; and water-efficient landscape design.

3.3.8 Anticipated Construction Schedule

Construction of the Project would commence with demolition of the existing buildings. This phase would be followed by grading and excavation for the subterranean levels. Building foundations would then be laid, followed by building construction, paving/concrete installation, and landscape installation. Project construction is anticipated to begin in 2021 and be completed in 2023. It is estimated that approximately 74,800 cubic yards of export material would be hauled from the Project Site.

3.4 REQUESTED PERMITS AND APPROVALS

The list below includes the anticipated requests for approval of the Project. The Environmental Impact Report will analyze impacts associated with the Project and will provide environmental review sufficient for all necessary entitlements and public agency actions associated with the Project. The discretionary entitlements, reviews, permits and approvals required to implement the Project include, but are not necessarily limited to, the following:

- Pursuant to LAMC Section 14.3.1, an Eldercare Facility Unified Permit to permit an eldercare facility to be located on a lot within the R3-1 and C2-1VL Zones where the eldercare facility does not meet the use, area, height, and setback provisions of the Zones. Specifically, to permit the following:

  – an eldercare facility use on the R3-zoned portion of the Project Site;

  – density averaging across the Project Site;

  – a maximum floor area ratio of 2.66:1 averaged across the Project Site;

  – a maximum building height of 70 feet for a portion of the proposed building, in lieu of the 45 feet otherwise permitted in the R3-1 and C2-IVL Zones; and relief from transitional height limitations for the portions of the building located within the C2 Zone;

  – over-in-height retaining walls (to be confirmed);

  – the sale and service of alcoholic beverages as an accessory use to the operation of the eldercare facility (or pursuant to LAMC 12.24.W.1 as a conditional use approval); and

  – access from a less restrictive zone to more restrictive zone for accessory uses such as parking.

- Pursuant to LAMC Section 16.05 and 14.3.1.B, Site Plan Review for a development project consisting of 50 or more of net new residential dwelling units and/or guest rooms;

- Pursuant to LAMC Sections 17.03 and 17.15, a Division of Land (Vesting Tentative Tract Map No. 82442) for the merger and resubdivision of the Project Site, merging all of the existing lots, including the merger of a portion of Bellwood Avenue; to designate yards such that the central northerly property line is designated as the front yard and the southernmost property line is designated as the rear yard and all other property lines would be designated as side yards; and a Haul Route Approval; and

- Other discretionary and ministerial permits and approvals that may be deemed necessary, including, but not limited to, temporary street closure permits, grading permits, excavation permits, foundation permits, and building permits.

4. ENVIRONMENTAL IMPACT ANALYSIS

I. AESTHETICS

Senate Bill (SB) 743 [Public Resources Code (PRC) Section 21099(d)] sets forth guidelines for evaluating project transportation impacts for transit-oriented infill projects under CEQA, as follows: "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area (TPA) shall not be considered significant impacts on the environment." PRC Section 21099 defines a "transit priority area" as an area within 0.5 miles of a major transit stop that is "existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." PRC Section 21064.3 defines "major transit stop" as "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." PRC Section 21099 defines an "infill site" as a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.

The related City of Los Angeles Department of City Planning Zoning Information (ZI) File ZI No. 2452 provides further instruction concerning the definition of transit priority projects and that "visual resources, aesthetic character, shade and shadow, light and glare, and scenic vistas or any other aesthetic impact as defined in the City's CEQA Threshold Guide shall not be considered an impact for infill projects within TPAs pursuant to CEQA."[4]

The City's Zone Information and Map Access System (ZIMAS) identifies a portion of the Project Site as located within a TPA (Lots 33-37 of Block 13 of Tract 7260 and 10-13 of Block 14 of Tract 7260) while other portions of the Project Site are not currently identified as located within a TPA (Lots 29-32 of Block 13 of Tract 7260). As such, the potential aesthetics impacts of the Project are discussed herein and in the forthcoming EIR to be prepared for the Project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒

[4] City of Los Angeles Department of City Planning, Zoning Information File ZA No. 2452, Transit Priority Areas (TPAs)/Exemptions to Aesthetics and Parking Within TPAs Pursuant to CEQA. Available at: http://zimas.lacity.org/documents/zoneinfo/ZI2452.pdf. Accessed January 25, 2019.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☒	☐	☐	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

a. Have a substantial adverse effect on a scenic vista?

No Impact. A scenic vista is a panoramic view of a valued visual resource. Based on the City's 2006 L.A. CEQA Thresholds Guide, panoramic views or vistas provide visual access to a large geographic area, for which the field of view can be wide and extend into the distance. According to the L.A. CEQA Thresholds Guide, panoramic views are typically associated with vantage points looking out over a section of urban or natural areas that provide a geographic orientation not commonly available. Examples of panoramic views include an urban skyline, valley mountain range, the ocean, or other water bodies.

As discussed in Section 3, Project Description, of this Initial Study, the Project Site includes parcels located generally north/west and east/south of Bellwood Avenue as well as the portion of Bellwood Avenue that bifurcates the Project Site. The portion of the Project Site located generally north/west of Bellwood Avenue is bounded by the Century Park hotel to the north, Bellwood Avenue and multi-family residential uses to the east and south, and a small commercial shopping center to the west that includes a cleaners and a smog check station. The portion of the Project Site located east and south of Bellwood Avenue is generally bounded by a Courtyard by Marriott hotel and Bellwood Avenue to the north, single-family residential uses to the east and south, and a beauty salon to the west. Due to the highly urbanized and built out surroundings, publicly available scenic vistas of any valued visual resources that may exist in the vicinity of the Project Site are not available. Therefore, development of the Project would not have the potential to substantially or adversely affect a scenic vista since none currently exist. No impacts would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The Project Site is not located along a state scenic highway. The nearest officially designated state scenic highway is California State Route 2 (SR-2), which is located approximately 25 miles northeast of the Project Site. In addition, the nearest officially eligible (not yet designated) state scenic highway is along the California State Route 1 (SR-1), approximately six miles west of the Project Site,[5] and the nearest City-designated scenic parkway is along Avenue of the Stars, approximately 0.6 mile northeast of the Project Site.[6] Thus, the Project would not substantially damage scenic resources within a designated scenic highway as there are no scenic highways along the Project Site. No impacts would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Potentially Significant Impact. As discussed in Section 3, Project Description, of this Initial Study, the Project Site is located within the West Los Angeles Community Plan area of the City of Los Angeles, in an urbanized area characterized by a mixture of low- and mid-rise buildings occupied by a mix of residential and commercial uses. The Project Site includes parcels located generally north/west and east/south of Bellwood Avenue as well as the portion of Bellwood Avenue that bifurcates the Project Site. The portion of the Project Site located generally north/west of Bellwood Avenue is bounded by the Century Park hotel to the north, Bellwood Avenue and multi-family residential uses to the east and south, and a small commercial shopping center to the west that includes a cleaners and a smog check station. The portion of the Project Site located east and south of Bellwood Avenue is generally bounded by a Courtyard by Marriott hotel and Bellwood Avenue to the north, single-family residential uses to the east and south, and a beauty salon to the west. Beyond the immediate surroundings of the Project Site are additional commercial and office uses along Olympic Boulevard, including a Ralph's grocery store located to the north and a Goodwill Donation Center to the west. Single- and multi-family residential uses continue east and south of the Project Site. In addition, the Project Site is currently developed with several multi-family residential buildings and associated structures and parking. Existing landscaping within the Project Site includes several ornamental shrubs and trees. Due to the urbanized and built out surroundings as well as the types of uses within and surrounding the Project Site, neither the Project Site nor its surroundings reflect an area of special scenic quality. Notwithstanding, the EIR for the Project will include further discussion regarding the Project's consistency with applicable zoning and other regulations governing scenic quality, including the City's General Plan Framework Element Urban Form and Neighborhood Design Chapter and the Citywide Design Guidelines.

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. The existing ambient nighttime lighting environment within the Project Site and vicinity is typical of a developed, urban environment where the primary nighttime lighting sources include interior light spillage from buildings, vehicle headlights along roadways and in parking

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5 California Scenic Highway Mapping System, Los Angeles County, www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm, accessed November 13, 2018.

6 Mobility Plan 2035, Map A3, Citywide General Plan Circulation System—West Subarea.

areas, signage, street lamps, and security/parking lighting. Glare sources within the Project Site and vicinity include glass and metal, vehicle and building surfaces. The Project would introduce new sources of light and glare that are typically associated with residential uses, including architectural lighting, signage lighting, interior lighting, and security and wayfinding lighting. Construction of the Project also has the potential to generate light and glare. The surrounding properties to the east, south, and north are generally single-family residences with views of the Project Site. The topography of the surrounding adjacent areas varies, providing different viewing aspects to the Project Site. Provided below is an analysis of the Project's potential impacts related to light and glare during construction and operation.

Construction

The Project's construction hours would comply with the Los Angeles Municipal Code (LAMC), which provides that construction activities be limited to the hours of 7:00 A.M. to 9:00 P.M. Monday to Friday and 8:00 A.M. to 6:00 P.M. on Saturday. Pursuant to the LAMC, no construction activities are permitted on Sundays. Given the nature of the construction labor force (with a typical eight-hour work day beginning at 7:00 A.M.), the majority of Project construction would occur during daylight hours. However, there is a potential that construction activities could require the limited use of artificial lighting during the winter season when daylight may not be sufficient earlier in the day. Outdoor lighting sources such as floodlights, spot lights, and/or headlights associated with construction equipment and hauling trucks typically accompany nighttime construction activities. To the extent evening construction includes artificial light sources, such use would be temporary and would cease upon completion of proposed Project construction. Further, construction-related illumination would be used for safety and security purposes only, in compliance with LAMC light intensity requirements. In addition, construction lighting, while potentially bright, would be highly focused on the particular area undergoing work. Thus, with adherence to existing LAMC regulations, construction of the Project would not create a new source of substantial light which would adversely affect day or nighttime views in the area. Therefore, light impacts associated with Project construction would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

Daytime glare could potentially accompany construction activities if reflective construction materials were positioned in highly visible locations where glare conditions (e.g., orientation and presence of glare-sensitive uses) could occur. However, any glare would be highly transitory and short-term, given the movement of construction equipment and materials within the construction area and the temporary nature of construction activities within each area of the Project Site. In addition, large surfaces that are usually required to generate substantial glare are typically not an element of construction activities. Furthermore, construction activities would be screened by temporary fencing and surrounding perimeter landscaping. As such, construction of the Project would not create a new source of substantial glare which would adversely affect day or nighttime views in the area. Therefore, glare impacts associated with Project construction would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

Operation

As discussed in Section 3, Project Description, of this Initial Study, the Project proposes the development of an eldercare facility consisting of 192 senior housing residential units; 50,463 square feet of indoor common areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area; and 14,630 square feet of outdoor common areas. The proposed uses would be located within a single

building ranging in height from 38 feet to 70 feet, or three to six stories. Three existing multi-family residential developments with a total of 112 residential units and 43,939 square feet would be removed to accommodate the Project. Overall, the Project would be designed to create a visually unified site with a new building designed to complement the existing surrounding uses and respond to the low- to mid-scale character of the surrounding area.

Exterior lighting along the public areas would include pedestrian-scale (i.e., lower to the ground, spaced closer together) fixtures. Exterior lighting would incorporate low-level exterior lights on the building and along pathways for security and wayfinding purposes. In addition, low-level lighting to accent signage, architectural features, and landscaping elements would be incorporated throughout the Project Site. Project lighting would be designed to minimize light trespass from the Project Site and would comply with all LAMC requirements. Night lighting at the Project Site would be low profile and at the necessary intensity to provide a safe walkable environment along walking paths. Roof terrace lighting would be of similar light levels, directed downward towards walkable surfaces, and shielded from view of the adjacent residential neighbors. All new street and pedestrian lighting within the public right-of-way would comply with applicable City regulations and would require approval from the Bureau of Street Lighting in order to maintain appropriate and safe lighting levels on sidewalks and roadways while minimizing light and glare on adjacent properties.

The proposed lighting sources would be similar to other lighting sources on the Project Site and in the Project Site vicinity and would not generate artificial light levels that are out of character with the surrounding area. Any new outdoor lighting provided by the Project would be low-level and would not result in a substantive change in ambient illumination levels over existing conditions. In addition, outdoor security and architectural lighting would be shielded and directed onto building surfaces and towards the interior of the Project Site to avoid light spillover onto sensitive uses. Project lighting would also meet all applicable LAMC lighting standards. As required by LAMC Section 93.0117(b), exterior light sources and building materials would not cause more than two (2) foot-candles of lighting intensity or generate direct glare onto exterior glazed windows or glass doors on any property containing residential units; an elevated habitable porch, deck, or balcony on any property containing residential units; or any ground surface intended for uses such as recreation, barbecue or lawn areas, or any other property containing a residential unit or units.

With regard to glare, daytime glare can result from sunlight reflecting from a shiny surface that would interfere with the performance of an off-site activity. Reflective surfaces can be associated with window glass and polished surfaces, such as metallic trim. Sun reflection can also occur with reflected light from parked vehicles. In general building materials would include smooth troweled stucco, composite metal wall panels with wood finish, limestone panels and glass. In addition, all parking would be provided in a subterranean parking garage. As such, there would be limited potential from glare associated with parked vehicles. Glass used in building façades would also be low-reflective or treated with an anti-reflective coating to minimize glare. It is also noted that there is a grade difference ranging between approximately 14 feet to 42 feet from the adjacent single-family residential uses along the southern and eastern boundaries of the Project Site, such that the Project Site is situated below the adjacent single-family residential uses. In addition, the backyards of these residential uses face the Project Site and include extensive existing landscaping. Further, the Project would incorporate additional perimeter landscaping to minimize views of the Project Site and any associated glare.

Based on the above, Project operation would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Impacts would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

II. AGRICULTURE AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The Project Site is located in an urbanized area of the City of Los Angeles. As discussed in Section 3, Project Description, of this Initial Study, the Project Site is currently developed with multi-family residential buildings and associated parking areas. In addition, the uses surrounding the Project Site primarily include commercial and residential uses. No agricultural uses or operations occur on-site or in the vicinity of the Project Site. The Project Site and surrounding area are also not mapped as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency Department of Conservation.[7] As such, the Project would not convert farmland to a non-agricultural use. No impacts would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Project Site is zoned as R3-1-O (Multiple Residential, Height District 1, Oil Drilling) and C2-1VL-O (Commercial, Height District 1VL, Oil Drilling) which permit a variety of residential and commercial uses. The Project Site is not zoned for agricultural use. Furthermore, no agricultural zoning is present in the surrounding area. The Project Site and surrounding area are also not enrolled under a Williamson Act Contract.[8] Therefore, the Project would not conflict with any zoning for agricultural uses or a Williamson Act Contract. No impacts would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. As previously discussed, the Project Site is located in an urbanized area and is currently developed with multi-family residential buildings and associated parking areas. The Project Site does not include any forest land or timberland. In addition, the Project Site is currently zoned for residential and commercial uses. The Project Site is not zoned for forest land and is not used as forest land.[9] Therefore, the Project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland as defined by the Public Resources Code. No impacts would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

d. Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As previously discussed, the Project Site is located in an urbanized area and does not include any forest land. Therefore, the Project would not result in the loss or conversion of forest land to non-forest use. No impacts would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

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7 City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Report for APNs 4315018034, 4315018033, 4315018032, 4315018031, 4315018030, and 4315018029, http://zimas.lacity.org/, accessed November 13, 2018.

8 California Department of Conservation, Los Angeles County Williamson Act FY 2015/2016, 2016.

9 City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Report for APNs 4315018034, 4315018033, 4315018032, 4315018031, 4315018030, and 4315018029, http://zimas.lacity.org/, accessed November 13, 2018.

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. As previously discussed above, the Project Site is located in an urbanized area of the City of Los Angeles and does not include farmland or forest land. The Project Site and surrounding area are also not mapped as farmland or forest land, are not zoned for farmland/agricultural use or forest land, and do not contain any agricultural or forest uses.[10] As such, the Project would not result in the conversion of farmland to non-agricultural use or in the conversion of forest land to non-forest use. No impacts would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

III. AIR QUALITY

Where available, the significance criteria established by the South Coast Air Quality Management District (SCAQMD) may be relied upon to make the following determinations.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

a. Conflict with or obstruct implementation of the applicable air quality plan?

Potentially Significant Impact. The Project Site is located within the 6,700-square-mile South Coast Air Basin (the Basin). Within the Basin, the South Coast Air Quality Management District (SCAQMD) is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the Basin is in non-attainment (i.e., ozone, particulate matter less than 2.5 microns in size [$PM_{2.5}$],

[10] City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Report for APNs 4315018034, 4315018033, 4315018032, 4315018031, 4315018030, and 4315018029, http://zimas.lacity.org/, accessed November 13, 2018.

and lead[11]). The SCAQMD's 2016 Air Quality Management Plan (AQMP) contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by the Southern California Association of Governments (SCAG). SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment.[12] With regard to future growth, SCAG has prepared the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS), which provides population, housing, and employment projections for cities under its jurisdiction. The growth projections in the 2016–2040 RTP/SCS are based on growth projections in local general plans for jurisdictions in SCAG's planning area. Construction and operation of the Project may result in an increase in stationary and mobile source air emissions. As a result, development of the Project could have a potential adverse effect on the SCAQMD's implementation of the AQMP. Therefore, the EIR will provide further analysis of the Project's consistency with the SCAQMD's AQMP.

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Potentially Significant Impact. As discussed above, construction and operation of the Project would result in the emission of air pollutants in the South Coast Air Basin, which is currently in non-attainment of federal air quality standards for ozone, $PM_{2.5}$ and lead, and State air quality standards for ozone, particulate matter less than 10 microns in size (PM_{10}), and $PM_{2.5}$. Therefore, implementation of the Project could potentially contribute to air quality impacts, which could cause a cumulative impact in the Basin. The EIR will provide further analysis of cumulative air pollutant emissions associated with the Project.

c. Expose sensitive receptors to substantial pollutant concentrations?

Potentially Significant Impact. As discussed above, the Project could result in increased short- and long-term air pollutant emissions from the Project Site during construction (short-term) and operation (long-term). Sensitive receptors located in the vicinity of the Project Site include residential uses. Therefore, the Project could expose sensitive receptors to additional pollutant concentrations and the EIR will provide further analysis of the Project's potential to result in substantial adverse impacts to sensitive receptors.

d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. No objectionable odors are anticipated as a result of either construction or operation of the Project. Specifically, construction of the Project would involve the use of conventional building materials typical of construction projects of similar type and size. Any odors that may be generated during construction would be localized and temporary in nature and would not be sufficient to affect a substantial number of people.

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[11] Partial Nonattainment designation for lead for the Los Angeles County portion of the Basin only.

[12] SCAG serves as the federally designated metropolitan planning organization (MPO) for the Southern California region.

With respect to Project operation, according to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project would not involve these types of uses as the Project would primarily include residential uses. On-site trash receptacles would also be contained, located, and maintained in a manner that promotes odor control, and would not result in substantially adverse odor impacts.

Construction and operation of the Project would also comply with SCAQMD Rules 401, 402, and 403, regarding visible emissions violations.[13] In particular, Rule 402 provides that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.[14]

Based on the above, the potential odor impact during construction and operation of the Project would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

IV. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

[13] SCAQMD, Visible Emissions, Public Nuisance, and Fugitive Dust, www.aqmd.gov/home/regulations/compliance/inspection-process/visible-emissions-public-nuisance-fugitive-dust, accessed November 13, 2018.

[14] SCAQMD, Rule 402, Nuisance, www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf, accessed November 13, 2018.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant Impact. The Project Site is located in an urbanized area and is currently developed with three multi-family residential developments and associated parking. Due to the urbanized and disturbed nature of the Project Site and the surrounding areas, and lack of large expanses of open space areas, species likely to occur on-site are limited to small terrestrial and avian species typically found in urbanized developed settings. Based on the lack of habitat on the Project Site, it is unlikely any special status species listed by the California Department of Fish and Wildlife[15] or by the U.S. Fish and Wildlife Service[16] would be present on-site. Furthermore, the Project Site is not located in or adjacent to a Biological Resource Area as defined by the City of Los Angeles.[17] Therefore, the Project would not have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Impacts would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

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15 California Department of Fish and Wildlife, California Natural Diversity Database, Special Animals List, October 2017.

16 United States Fish and Wildlife Service, ECOS Environmental Conservation Online System, Listed species believed to or known to occur in California, https://ecos.fws.gov/ecp0/reports/species-listed-by-state-report?state=CA&status=listed, accessed November 13, 2018.

17 City of Los Angeles, Department of City Planning, Los Angeles Citywide General Plan Framework, Draft Environmental Impact Report, January 19, 1995, P. 2-18-4.

No Impact. The Project Site is located in an urbanized area and is currently developed with three multi-family residential developments and associated parking. No riparian or other sensitive natural community exists on the Project Site or in the surrounding area.[18,19] Furthermore, the Project Site and surroundings are not located in or adjacent to a Biological Resource Area or Significant Ecological Area as defined by the City of Los Angeles or County of Los Angeles.[20,21] In addition, there are no other sensitive natural communities identified by the California Department of Fish and Wildlife or the US Fish and Wildlife Service.[22,23,24] Therefore, the Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community. No impact would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The Project Site is located in an urbanized area and is currently developed with three multi-family residential developments and associated parking. In addition, the surrounding area has been fully developed. No water bodies or federally protected wetlands as defined by Section 404 of the Clean Water Act exist on the Project Site.[25] As such, the Project would not have an adverse effect on federally protected wetlands. No impact would occur, and no mitigation measures are required. Therefore, no further evaluation of this topic in an EIR is required.

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact. As described above, the Project Site is located in an urbanized area and is currently developed with three multi-family residential developments and associated parking. In addition, the areas surrounding the Project Site are fully developed and there are no large expanses of open space areas within and surrounding the Project Site that provide linkages to natural open spaces areas and which may serve as wildlife corridors. Furthermore, the Project Site is not located in or adjacent

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18 City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Report for APNs 4315018034, 4315018033, 4315018032, 4315018031, 4315018030, and 4315018029, http://zimas.lacity.org/, accessed November 13, 2018.

19 United States Environmental Protection Agency, NEPAssist, https://nepassisttool.epa.gov/nepassist/nepamap.aspx, accessed November 13, 2018.

20 City of Los Angeles, Department of City Planning, Los Angeles Citywide General Plan Framework, Draft Environmental Impact Report, January 19, 1995, P. 2-18-4.

21 Los Angeles County, Los Angeles County General Plan, Figure 9.3 Significant Ecological Areas and Coastal Resource Areas Policy Map, October 6, 2015.

22 California Department of Fish and Wildlife, Biogeographic Information and Observation System (BIOS), https://map.dfg.ca.gov/bios/, accessed November 13, 2018.

23 California Department of Fish and Wildlife, CDFW Lands, https://map.dfg.ca.gov/lands/, accessed November 13, 2018.

24 United States Fish and Wildlife Service, National Wetlands Inventory, https://www.fws.gov/wetlands/data/Mapper.html, accessed November 13, 2018.

25 United States Environmental Protection Agency, NEPAssist, https://nepassisttool.epa.gov/nepassist/nepamap.aspx, accessed November 13, 2018.

to a Biological Resource Area or Significant Ecological Area as defined by the City of Los Angeles or County of Los Angeles.[26, 27]

On-site trees and shrubs are ornamental in nature. A majority of the existing ornamental trees and shrubs will be removed during construction of the Project. Trees to be removed could potentially provide nesting sites for migratory birds. The Project would comply with the Migratory Bird Treaty Act, which prohibits the take, possession, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to federal regulations. Additionally, California Fish & Game Code Section 3503 (Section 3503) states that "[i]t is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." No exceptions are provided in the code and CDFW has not promulgated regulations interpreting these provisions. To ensure regulatory compliance with the Migratory Bird Treaty Act and California Fish and Game Code, the Project would require that tree removal activities would take place outside of the nesting season (February 1–August 31), to the extent feasible. In addition, should vegetation removal activities occur during the nesting season, a biological monitor would be present during the removal activities to ensure that no active nests would be impacted. If active nests are found, a buffer would be established until the fledglings have left the nest. Therefore, with compliance with the Migratory Bird Treaty Act, the Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. Impacts would be less than significant and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands)?

Less Than Significant Impact. The City of Los Angeles Protected Tree Ordinance (Chapter IV, Article 6 of the LAMC) regulates the relocation or removal of all Southern California native oak trees (excluding scrub oak), California black walnut trees, Western sycamore trees, and California Bay trees of at least four inches in diameter at breast height. These tree species are defined as "protected" by the City of Los Angeles. Trees that have been planted as part of a tree planting program are exempt from the City's Protected Tree Ordinance and are not considered protected. The City's Protected Tree Ordinance prohibits, without a permit, the removal of any regulated protected tree, including "acts which inflict damage upon root systems or other parts of the tree [...]" and requires that all regulated protected trees that are removed be replaced on at least a 2:1 basis with trees that are of a protected variety.

As described in the Tree Survey included in Appendix IS-1 of this Initial Study, landscaping within the Project Site consists of 96 ornamental trees and shrubs, including eight street trees located within the portion of Bellwood Avenue proposed to be vacated and realigned, as well as ornamental trees whose trunks are on adjacent property but include roots and canopies on the Project Site. As provided in the Tree Survey, there are no trees on the Project Site that are considered protected by the City of Los Angeles Protected Tree Ordinance. Of the 96 ornamental trees identified on the Tree Survey, 65 trees

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[26] City of Los Angeles, Department of City Planning, Los Angeles Citywide General Plan Framework, Draft Environmental Impact Report, January 19, 1995, P. 2-18-4.

[27] Los Angeles County, Los Angeles County General Plan, Figure 9.3 Significant Ecological Areas and Coastal Resource Areas Policy Map, October 6, 2015.

would be removed as part of the Project, including eight street trees. In accordance with the Department of City Planning's policy, the on-site trees to be removed would be replaced on a 1:1 basis. In addition, pursuant to the requirements of the City of Los Angeles Urban Forestry Division, the eight street trees to be removed would be replaced on a 2:1 basis. Removal of the existing street trees in the public right-of-way would occur in accordance with the policies of the Los Angeles Department of Public Works, Bureau of Street Services, Urban Forestry Division. Therefore, the Project would not conflict with any local policies or ordinances protecting biological resources. Impacts would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The Project Site is located in an urbanized area and is currently developed with three multi-family residential developments and associated parking. As previously described, landscaping within the Project Site is limited, consisting of ornamental trees and shrubs. As discussed above, the Project Site does not support any habitat or natural community.[28,29] No Conservation Plan, Natural Community Conservation Plan, or other approved habitat conservation plans apply to the Project Site.[30] Thus, the Project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other related plans. No impact would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

V. CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	☐	☐	☒	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☐	☒	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

a. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

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28 City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Report for APNs 4315018034, 4315018033, 4315018032, 4315018031, 4315018030, and 4315018029, http://zimas.lacity.org/, accessed November 13, 2018.

29 United States Environmental Protection Agency, NEPAssist, https://nepassisttool.epa.gov/nepassist/nepamap.aspx, accessed December 10, 2018.

30 California Department of Fish and Wildlife, California Regional Conservation Plans, October 2017.

Less Than Significant Impact. Section 15064.5 of the CEQA Guidelines generally defines a historic resource as a resource that is: (1) listed in, or determined to be eligible for listing in the California Register of Historical Resources (California Register); (2) included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code); or (3) identified as significant in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code). In addition, any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register. The California Register automatically includes all properties listed in the National Register of Historic Places (National Register) and those formally determined to be eligible for listing in the National Register.

Based on a review of the SurveyLA Historic Resources Survey Report—West Los Angeles Community Plan Area,[31] the HistoricPlacesLA database,[32] and the Los Angeles ZIMAS database, the Project Site, including the existing structures within the Project Site, has not been individually listed in or formally determined to be eligible for listing in the National Register or the California Register. In addition, the Project Site has not been designated as a Historic-Cultural Monument and is not located within an existing Historic Preservation Overlay Zone. Furthermore, as analyzed in the Historical Resource Assessment Report, prepared by Historic Resources Group and provided in Appendix IS-2, of this Initial Study, the existing buildings on the Project Site are not eligible for historic designation in the National Register, the California Register, or as City of Los Angeles Historic-Cultural Monuments. Therefore, as no historic resources are located within the Project Site, removal of the existing buildings within the Project Site and development of the Project would not create a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines. Impacts would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines §15064.5?

Less Than Significant Impact. Section 15064.5(a)(3)(D) of the CEQA Guidelines generally defines archaeological resources as any resource that "has yielded, or may be likely to yield, information important in prehistory or history." Archaeological resources are features, such as tools, utensils, carvings, fabric, building foundations, etc., that document evidence of past human endeavors and that may be historically or culturally important to a significant earlier community.

The Project Site is located within a highly urbanized area and has been subject to grading and development in the past. Thus, surficial archaeological resources that may have existed at one time have likely been previously disturbed. In addition, the results of the archaeological records search conducted for the Project Site and included in Appendix IS-3 of this Initial Study indicate that there are no identified archaeological sites within the Project Site and one archaeological site located within a 0.5-mile radius of

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[31] City of Los Angeles, SurveyLA, Historic Resources Survey Report—West Los Angeles Community Plan Area, August 2012.

[32] City of Los Angeles, HistoricPlacesLA, www.historicplacesla.org/map, accessed January 11, 2019.

the Project Site. Nevertheless, the Project would require grading of the Project Site and excavations approximately 30 feet below grade, and previously unknown archaeological resources could be encountered. If an archaeological resource were to be discovered during construction of the Project, work in the area would cease, and deposits would first be evaluated for historic significance in accordance with CEQA Guidelines Section 15064.5. As set forth in CEQA Guidelines Section 15064.5, if the City determines that the archaeological resource is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code. If an archaeological resource does not meet the criteria for historical resources, but does meet the definition of a unique archaeological resource, construction work in the area would cease and the resource would be treated in accordance with the provisions of Section 21083.2 of the Public Resources Code. Therefore, given that there are no identified archaeological sites within the Project Site and the available regulations governing the treatment of any uncovered archaeological resources, the Project would not cause a substantial adverse change in the significance of an archaeological resource. With the implementation of regulatory requirements, impacts to archaeological resources would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

c. Disturb any human remains, including those interred outside of dedicated cemeteries?

Less Than Significant Impact. As discussed above, the Project Site is located within an urbanized area and has been subject to previous grading and development. No known traditional burial sites have been identified on the Project Site. In addition, if human remains were discovered during construction of the Project, work in the immediate vicinity would be halted, the County Coroner, construction manager, and other entities would be notified per California Health and Safety Code Section 7050.5, and disposition of the human remains and any associated grave goods would occur in accordance with Public Resources Code Section 5097.91 and 5097.98. With the implementation of regulatory requirements, the Project would not disturb any human remains. Impacts related to human remains would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

VI. ENERGY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☒	☐	☐	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☒	☐	☐	☐

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Potentially Significant Impact. As discussed in Attachment A, Project Description, of this Initial Study, the Project Site encompasses three existing multi-family residential developments totaling 112 units and 43,939 square feet. The Project would include 192 senior housing residential units and 50,463 square feet of common areas. The Project would comprise 241,754 square feet of floor area. Therefore, the Project may generate an increased demand for electricity and natural gas services provided by the Los Angeles Department of Water and Power and the Southern California Gas Company, respectively. While development of the Project would not be anticipated to cause wasteful, inefficient, and unnecessary consumption of energy resources, further analysis of the Project's demand on existing energy resources will be provided in the EIR.

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Potentially Significant Impact. First established in 2002 under Senate Bill 1078, California's Renewable Portfolio Standards require retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020.[33] The Los Angeles Department of Water and Power (LADWP) provides electrical service throughout the City and many areas of the Owens Valley. LADWP generates power from a variety of energy sources, including hydropower, coal, gas, nuclear sources, and renewable resources, such as wind, solar, and geothermal sources. In accordance with Senate Bill 1078, LADWP is required to procure at least 33 percent of its energy portfolio from renewable sources by 2020.

Regarding energy efficiency, the California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) were adopted to ensure that building construction, system design, and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The current California Building Energy Efficiency Standards (Title 24 standards) are the 2016 Title 24 standards, which became effective on January 1, 2017.[34] The 2016 Title 24 standards include efficiency improvements to the residential standards for attics, walls, water heating, and lighting and efficiency improvements to the non-residential standards include alignment with the American Society of Heating and Air-Conditioning Engineers (ASHRAE) 90.1 2013 national standards.[35]

As previously described, the Project Site encompasses three existing multi-family residential developments totaling 112 units and 43,939 square feet. The Project Site does not include any renewable energy sources used by LADWP. In addition, as discussed in Attachment A, Project Description, of this Initial Study, the Project has been designed and would be constructed to incorporate environmentally sustainable building features and construction protocols required by the Los Angeles Green Building Code and CALGreen. While the Project would not be anticipated to conflict with or obstruct a state or local plan for renewable energy or energy efficiency, the Project's compliance with LADWP's plans for renewable energy as well as the Project's compliance with California Building Energy Efficiency Standards will be further evaluated in the EIR.

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[33] CPUC, California Renewables Portfolio Standard (RPS), www.cpuc.ca.gov/RPS_Homepage/, accessed October 8, 2018.

[34] CEC, 2016 Building Energy Efficiency Standards, www.energy.ca.gov/title24/2016standards/, accessed October 8, 2018.

[35] CEC, 2016 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, June 2015.

VII. GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on a geologic unit that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

The following analysis is based on the Geotechnical Investigation prepared for the Project by Geocon West, Inc., dated May 31, 2018, as well as the Geology and Soils Report Approval Letter provided by the Grading Division of the Los Angeles Department of Building and Safety dated December 26, 2018. All specific information on geologic and soils conditions in the discussion below is based on the Geotechnical Investigation unless otherwise noted. The Geotechnical Investigation and the Geology and Soils Report Approval Letter are included as Appendix IS-4 of this Initial Study.

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less Than Significant Impact. Fault rupture occurs when movement on a fault deep within the earth breaks through to the surface. Based on criteria established by the California Geological Survey, faults can be classified as active, potentially active, or inactive. Active faults are those having historically produced earthquakes or shown evidence of movement within the past 11,000 years (during the Holocene Epoch). Potentially active faults have demonstrated displacement within the last 1.6 million years (during the Pleistocene Epoch) while not displacing Holocene Strata. Inactive faults do not exhibit displacement within the last 1.6 million years. In addition, buried thrust faults, which are faults with no surface exposure, may exist in the vicinity of the Project Site; however, due to their buried nature, the existence of buried thrust faults is usually not known until they produce an earthquake.

The California Geological Survey establishes regulatory zones around active faults, called Alquist-Priolo Earthquake Fault Zones (previously called Special Study Zones). These zones, which extend from 200 feet to 500 feet on each side of a known fault, identify areas where a potential surface fault rupture could prove hazardous for buildings used for human occupancy. Development projects located within an Alquist-Priolo Earthquake Fault Zone are required to prepare special geotechnical studies to characterize hazards from any potential surface ruptures. In addition, the City of Los Angeles designates Fault Rupture Study Areas along the sides of active and potentially active faults to establish areas of potential hazard due to fault rupture.

The Project Site is not located within an Alquist-Priolo Earthquake Fault Zone or a Fault Rupture Study Area.[36] The closest active fault is the Santa Monica Fault located approximately 0.5 mile from the Project Site. Furthermore, no active faults with the potential for surface fault rupture are known to pass directly beneath the Project Site. Therefore, since there are no known faults beneath the Project Site, the Project would not exacerbate existing environmental conditions such that people or structures would be exposed to rupture of a known earthquake fault. The Project also would not involve mining operations, deep excavation into the earth, or boring of large areas, which could create unstable seismic conditions or stresses in the Earth's crust. Therefore, the Project would not result in the rupture of a known earthquake fault caused in whole or in part by the Project's exacerbation of the existing environmental conditions. Impacts would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

ii. Strong seismic ground?

Less Than Significant Impact. The Project Site is located within the seismically active region of Southern California and would potentially be subject to strong seismic ground shaking if a moderate to strong earthquake occurs on a local or regional fault. As previously stated in Response to Checklist

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[36] Los Angeles General Plan Safety Element, Exhibit A, Alquist-Priolo Special Study Zones & Fault Rupture Study Areas, November 1996, p. 47.

Question VII.a.i above, no active faults are known to pass directly beneath the Project Site and, therefore, the Project would not exacerbate existing environmental conditions (i.e., trigger an earthquake by disrupting a known earthquake fault) such that people or structures would be exposed to strong seismic ground shaking. In addition, the Project is located in a highly urbanized and fully developed area and these existing environmental conditions are not such that strong seismic ground shaking would be exacerbated by the Project. Furthermore, the Project would not involve mining operations, deep excavation into the earth, or boring of large areas, which could create unstable seismic conditions, including strong seismic ground shaking. Notwithstanding, state and local code requirements ensure that buildings are designed and constructed in a manner that, although the buildings may sustain damage during a major earthquake, would reduce the substantial risk that buildings would collapse. Specifically, the state and City mandate compliance with numerous rules related to seismic safety, including the Alquist-Priolo Earthquake Fault Zoning Act, Seismic Safety Act, Seismic Hazards Mapping Act, the City's General Plan Safety Element, and the Los Angeles Building Code (LABC). Pursuant to those laws, the Project must demonstrate compliance with the applicable provisions of these safety requirements before permits can be issued for construction of the Project. Accordingly, the design and construction of the Project would comply with all applicable existing regulatory requirements, the applicable provisions of the LABC relating to seismic safety, and the application of accepted and proven construction engineering practices.

The Project would specifically comply with the LABC, which incorporates current seismic design provisions of the 2016 California Building Code (CBC), with City amendments, to minimize seismic impacts. The 2016 CBC incorporates the latest seismic design standards for structural loads and materials, as well as provisions from the National Earthquake Hazards Reduction Program to mitigate losses from an earthquake and maximize earthquake safety. The Los Angeles Department of Building and Safety (LADBS) is responsible for implementing the provisions of the LABC, and the Project would be required to comply with the plan review and LADBS permitting requirements, including the recommendations provided in the LADBS Geology and Soils Report Approval Letter. Through compliance with regulatory requirements and site-specific geotechnical recommendations contained in a final design-level geotechnical engineering report, the Project would not exacerbate existing hazardous environmental conditions related to strong seismic ground shaking, which could result in substantial adverse effects, including the risk of loss, injury, or death. Thus, impacts related to strong seismic ground shaking would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction is a phenomenon in which loose, saturated, granular soils behave similarly to a fluid when subjected to high-intensity ground shaking. Liquefaction occurs when three general conditions exist: shallow groundwater; low density, fine, clean sandy soils; and strong ground motion. As provided in the Geotechnical Investigation, neither the City of Los Angeles nor the State of California classifies the Project Site as part of a potentially liquefiable area.[37,38] In addition, subsurface soils at the Project Site are well-consolidated and dense, and would not be expected to

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[37] City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Report for APNs 4315018034, 4315018033, 4315018032, 4315018031, 4315018030, and 4315018029, http://zimas.lacity.org/, accessed November 13, 2018.

[38] State of California, California Geological Survey, Seismic Hazard Zones. Beverly Hills Quadrangle, March 25, 1999.

liquefy, even if water were present. Further, the historically highest groundwater level at the Project Site is greater than 40 feet below ground surface.[39] As discussed above in Response to Checklist Question No. VII.a.ii, development of the Project would not exacerbate existing conditions that would cause people or structures to be exposed to strong seismic ground shaking. Thus, the three conditions associated with the occurrence of liquefaction (i.e., shallow groundwater, low-density, sandy soils, and strong ground motion) do not all exist on the Project Site. As such, based on the underlying conditions of the Project Site, the Geotechnical Investigation concluded that the potential for liquefaction and associated ground deformation beneath the Project Site is very low. Therefore, the Project would not exacerbate existing environmental conditions that could cause seismic-related ground failure, including liquefaction. Impacts associated with liquefaction would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

iv. Landslides?

No Impact. Landslides generally occur in loosely consolidated, wet soil and/or rocks on steep sloping terrain. The Project Site and surrounding area are fully developed and the Project Site is generally characterized by relatively level topography. Along the southern and eastern boundaries of the Project Site there is a grade difference from the adjacent single-family residential uses such that the Project Site is situated below the adjacent single-family residential uses. While the Project Site is sloped down from those single-family residential uses, the backyards of those single-family residential uses abut the Project Site and most of those yards are heavily landscaped and or feature a boundary wall. As such, large areas of exposed soil and/or rocks that could fall onto the Project Site would not typically exist within single-family residences. In addition, the Project Site is not located in a landslide area as mapped by the State,[40] nor is the Project Site mapped as a landslide area by the City of Los Angeles.[41,42] As discussed above, the Project would be required to comply with plan review and LADBS permitting requirements, including the recommendations provided in the LADBS Geology and Soils Report Approval Letter and site-specific geotechnical recommendations contained in a final design-level geotechnical engineering report. To the extent necessary, lateral support to adjacent properties will be maintained during Project construction and supported by shoring or retaining walls consistent with the recommendations of the Geology and Soils Report Approval Letter as appropriate. Upon buildout of the Project, the existing topography of the Project Site would not be substantially altered. Therefore, the Project would not exacerbate existing conditions that would result in the exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. As such, no impact would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

b. Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The Project Site is currently fully developed with buildings and surface parking areas. As such, there are no open spaces with exposed topsoil. However, development

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39 State of California, California Geological Survey, Seismic Hazard Zones. Beverly Hills Quadrangle, March 25, 1999.

40 State of California, California Geological Survey, Seismic Hazard Zones. Beverly Hills Quadrangle, March 25, 1999.

41 Los Angeles General Plan Safety Element, November 1996, Exhibit C, Landslide Inventory & Hillside Areas, p. 51.

42 City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Report for APNs 4315018034, 4315018033, 4315018032, 4315018031, 4315018030, and 4315018029, http://zimas.lacity.org/, accessed November 13, 2018.

of the Project would require grading, excavation, and other construction activities that have the potential to disturb existing soils underneath the Project Site and expose these soils to rainfall and wind during construction, thereby potentially resulting in soil erosion. This potential would be reduced by implementation of standard erosion controls imposed during site preparation and grading activities. Specifically, all grading activities would require grading permits from LADBS, which would include requirements and standards designed to limit potential effects associated with erosion to acceptable levels. In addition, on-site grading and site preparation would comply with all applicable provisions of Chapter IX, Article 1 of the LAMC, which addresses grading, excavations, and fills. Furthermore, the Project would be required to comply with the City's Low Impact Development (LID) ordinance and implement standard erosion controls to limit stormwater runoff, which can contribute to erosion. Regarding soil erosion during Project operations, the potential would be negligible since the Project Site would mostly remain fully developed. Therefore, with compliance with applicable regulatory requirements, impacts regarding soil erosion or the loss of topsoil would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

c. Be located on a geologic unit that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less Than Significant Impact. Along the southern and eastern boundaries of the Project Site there is a grade difference from the adjacent single-family residential uses such that the Project Site is situated below the adjacent single-family residential uses. Specifically, according to the Geotechnical Investigation, there is approximately a 10- to 15-foot increase in elevation from the rear of the Project Site to the properties to the south. The Project would require grading of the Project Site and excavations approximately 30 feet below grade. As discussed in the Geotechnical Investigation, due to the depth of proposed excavations and the proximity to the property lines, city streets, and adjacent off-site structures, excavation of the proposed subterranean levels would likely require sloping and shoring measures to provide a stable excavation. As set forth in the Geotechnical Investigation, where the proposed excavation would be deeper than an adjacent structure, the proposed shoring would be designed to resist the surcharge imposed by the adjacent off-site structures.

As discussed above, the Project Site is not located in a landslide area as mapped by the state, nor is the Project Site mapped as a landslide area by the City. In addition, the Project would not alter exposed soils on a hill, nor inject water into the soil upslope that could cause a landslide downhill. Additionally, while the Project Site is sloped down from the single-family residential uses along the rear of the Project Site, the backyards of those single-family residential uses abut the Project Site and most of those yards are heavily landscaped and/or feature a boundary/retaining wall. As such, large areas of exposed soil and/or rocks that could slide onto the Project Site would not typically exist within single-family residences.

Liquefaction-related effects include lateral spreading. Since the Project Site is not located in an identified liquefiable area, the potential for lateral spreading is low. As such, the Project would not be located on a geologic unit or soil that is unstable, which could potentially result in lateral spreading.

Subsidence generally occurs when a large portion of land is displaced vertically, usually due to the rapid and intensive withdrawal of subterranean fluids such as groundwater or oil. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring, or is planned at the Project Site.

Therefore, there is little to no potential for ground subsidence due to withdrawal of fluid or gas at the Project Site. Thus, impacts related to subsidence would be less than significant, and no mitigation measures are required.

As discussed above, according to the State of California Seismic Hazard Zones Map for the Los Angeles Quadrangle, the Project Site is not located within an area susceptible to liquefaction. Impacts associated with liquefaction would be less than significant, and no mitigation measures are required.

Collapsible soils consist of loose, dry, low-density materials that collapse and compact under the addition of water or excessive loading. Soil collapse occurs when the land surface is saturated at depths greater than those reached by typical rain events.[43] According to the Geotechnical Investigation, the Project Site is underlain by artificial fill and unconsolidated to semi-consolidated Pleistocene age alluvial and marine terrace deposits predominantly consisting of sand and sandy silt with occasional lenses of well graded sand and gravel. As described in the Geotechnical Investigation, artificial fill was encountered to depths of four to 10 feet beneath the existing ground surface. The artificial fill generally consists of sand and silty sand and can be characterized as slightly moist and medium dense. Pleistocene age alluvium and marine terrace deposits were encountered beneath the artificial fill. The alluvium generally consists of sand, sandy silt, and sand with silt with varying amounts of gravel and trace cobbles. The alluvial soils are characterized as slightly moist and medium dense to very dense or hard. Therefore, due to the type and density of the soils underlying the Project Site, the Project Site soils would not be considered collapsible soils.

Based on the above, the Project would not be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse, caused in whole or in part by the project's exacerbation of the existing environmental conditions. Impacts would be less than significant, and no mitigation measures are required. No further evaluation of this topic in the EIR is required.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact. Expansive soils are typically associated with fine-grained clayey soils that have the potential to shrink and swell with repeated cycles of wetting and drying. As described above, the soils underlying the Project Site are primarily sandy soils. In addition, as discussed in the Geotechnical Investigation, based on the granular nature of the underlying soils, the Project would not be prone to the effects of expansive soils. Therefore, the Project would not be located on expansive soil that would create a substantial direct or indirect risk to life or property. In addition, through standard construction practices involving excavation activities and the associated removal of underlying soils as well as the subsequent use of engineered soils, any potential effects associated with expansive soils would be addressed. As such, the Project would not increase the expansion potential of underlying soils. Therefore, impacts would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

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[43] Associated of Environmental & Engineering Geologists. Expansive and Collapsible Soil, www.aegweb.org/?page=ExpansiveSoil, accessed April 26, 2018.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The Project Site is located within a community served by existing sewage infrastructure. The Project's wastewater demand would be accommodated by connections to the existing wastewater infrastructure. As such, the Project would not require the use of septic tanks or alternative wastewater disposal systems. Therefore, the Project would have no impact related to the ability of soils to support septic tanks or alternative wastewater disposal systems. No impact would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant with Mitigation Incorporated. Paleontological resources are the fossilized remains of organisms that have lived in a region in the geologic past and whose remains are found in the accompanying geologic strata. This type of fossil record represents the primary source of information on ancient life forms, since the majority of species that have existed on earth from this era are extinct. The Project Site is located within a highly urbanized area and has been subject to grading and development in the past. Thus, surficial paleontological resources that may have existed at one time have likely been previously disturbed. In addition, a records search conducted for the Project Site included in Appendix IS-4 of this Initial Study indicates there are no previously encountered fossil vertebrate localities located within the Project Site. However, according to the records search, vertebrate fossil localities have been discovered nearby from the same sedimentary deposits that occur on the Project Site. In the very western portion of the Project Site, there are surficial deposits of younger Quaternary Alluvium. These younger Quaternary deposits typically do not contain significant vertebrate fossils in the uppermost layers, but at relatively shallow depth there are older sedimentary deposits that may contain significant fossil vertebrate remains. In most of the Project Site though there are surficial deposits of older Quaternary Alluvium, with terrestrial deposits in the northeastern portion and nominally marine deposits in the central and southern portions of the Project Site. The closest vertebrate fossil locality in these older Quaternary sediments is LACM 5501, northeast of the Project Site south of Olympic Boulevard between Avenue of the Stars and Century Park East, that produced fossil specimens of pond turtle, dog, and horse at shallow but unstated depth. Near the intersection of Wilshire Boulevard and Bedford Drive, further northeast of the Project Site, localities LACM 3355 and 3821 produced specimens of fossil horse and even-toed ungulates at a depth of 40 feet below the surface. The locality LACM 5833, northwest of the Project Site south of Wilshire Boulevard between Thayer Avenue and Westholme Avenue, produced fossils of horse, kangaroo rat, wood rat, meadow vole, and pocket gopher at shallow but unstated depth. In summary, the paleontological records search indicates that grading or very shallow excavations in the uppermost layers of soil and Quaternary deposits in the Project Site are unlikely to discover significant vertebrate fossils. However, according to the paleontological records search, deeper excavations have the potential to encounter significant remains of fossil vertebrates. As discussed above, grading to a maximum depth of approximately 30 feet would occur within the Project Site. Thus, the possibility exists that paleontological artifacts that were not recovered during prior construction or other human activity may be present. As set forth in Mitigation Measure CUL-MM-1, below, a qualified paleontologist would be retained in the event paleontological materials are encountered, and grading and excavation activities in the area of the exposed material would be temporarily diverted or redirected to facilitate evaluation and, if necessary, salvage. With implementation of Mitigation Measure CUL-MM-1, the Project would not destroy a unique paleontological resource or site. Impacts to paleontological

resources would be less than significant with implementation of mitigation. No further analysis of this topic in an EIR is required.

CUL-MM-1: If paleontological materials are encountered during Project grading and excavation, a qualified paleontologist shall be retained by the Applicant, and grading and excavation in the area of the exposed material shall be temporarily diverted or redirected to facilitate evaluation by the paleontologist and, if necessary, salvage. The paleontologist shall assess the discovered material(s) and prepare a survey, study or report evaluating the impact. The Applicant shall comply with the recommendations of the evaluating paleontologist, and a copy of the paleontological survey report shall be submitted to the Los Angeles County Natural History Museum and the Department of City Planning. Ground-disturbing activities may resume once the paleontologist's recommendations have been implemented to the satisfaction of the paleontologist.

There are no distinct and prominent geologic or topographic features (i.e., hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds, or wetlands) on the Project Site or vicinity. Therefore, the Project would not destroy any distinct and prominent geologic or topographic features. No impact related to distinct and prominent geologic or topographic features would occur, and no mitigation measures would be required. No further evaluation of this topic in the EIR is required.

VIII. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Potentially Significant Impact. Gases that trap heat in the atmosphere are called greenhouse gases since they have effects that are analogous to the way in which a greenhouse retains heat. Greenhouse gases are emitted by both natural processes and human activities. The accumulation of greenhouse gases in the atmosphere affects the earth's temperature. The State of California has undertaken initiatives designed to address the effects of greenhouse gas emissions, and to establish targets and emission reduction strategies for greenhouse gas emissions in California. Activities associated with the Project, including construction and operational activities, could result in greenhouse

gas emissions that may have a significant impact on the environment. Therefore, the EIR will provide further analysis of the Project's greenhouse gas emissions.

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Potentially Significant Impact. As the Project would have the potential to emit greenhouse gases, the EIR will include further evaluation of project-related emissions and associated emission reduction strategies to determine whether the Project conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases (e.g., Assembly Bill [AB] 32 and the City of Los Angeles Green Building Code).

IX. HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?	☐	☐	☒	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

The following analysis is based on the Phase I Environmental Site Assessment Report (Phase I ESA) and the Phase II Environmental Site Assessment Report (Phase II ESA) prepared for the Project by Converse Consultants, dated May 15, 2018, and May 31, 2018, respectively. The Phase I ESA and the Phase II ESA are included as Appendix IS-5 of this Initial Study.

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. The types and amounts of hazardous materials to be used for the Project would be typical of those used during construction activities and those typically used in the operation of eldercare facilities, as discussed in the following analysis.

Construction

The Project would not involve the routine transport of hazardous materials to and from the Project Site during construction. During demolition, excavation, on-site grading, and building construction, hazardous materials such as fuel and oils associated with construction equipment, as well as coatings, paints, adhesives, and caustic or acidic cleaners could be routinely used on the Project Site through the duration of construction. While some hazardous materials used during construction could require disposal, such activity would occur only for the duration of construction and would cease upon completion of the Project. As such, construction of the Project would not involve the routine disposal of hazardous materials. Notwithstanding, all potentially hazardous materials used during construction of the Project would be used and disposed of in accordance with manufacturers' specifications and instructions, thereby reducing the risk of hazardous materials use. In addition, existing regulations are aimed at establishing specific guidelines regarding risk planning and accident prevention, protection from exposure to specific chemicals, and the proper storage of hazardous materials. The Project would comply with all applicable federal, state, and local requirements concerning the use, storage, and management of hazardous materials. Consequently, Project construction activities would not create a significant hazard to the public or the environment through the use of hazardous materials during construction, and development of the Project on the Project Site would not exacerbate the current environmental conditions so as to create a significant hazard to the public or the environment. Therefore, impacts related to the routine transport, use, or disposal of hazardous materials during construction would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

Operation

Operation of the Project would involve the routine use of small quantities of potentially hazardous materials typical of those used in residential and commercial uses, including cleaning products, paints, and those used for maintenance of landscaping. Operation of the Project could also involve the routine

use of potentially hazardous materials typical of those used in a small medical facility, including biohazards waste and cleaning agents. As with Project construction, all hazardous materials used on the Project Site during operation would be used, stored, and disposed of in accordance with all applicable federal, state and local requirements. Therefore, with implementation of appropriate hazardous materials management protocols at the Project Site and compliance with all applicable local, state, and federal laws and regulations relating to environmental protection and the management of hazardous materials, impacts associated with the routine transport, use, or disposal of hazardous materials during operation of the Project would be less than significant and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. The current and past land uses within the Project Site were identified as part of the Phase I Environmental Site Assessment Report (ESA) to assess their potential to present concerns relative to the presence of hazards and/or the handling of hazardous materials. These concerns are classified as Recognized Environmental Conditions (RECs), which are defined in Section 1.1.1 of the ASTM Standard Practice as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, past release, or material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.

As discussed in the Phase I ESA, based on available historical sources, from as early as 1894 to 1938, the Project Site was undeveloped. In 1940, building permits for 11 residential buildings and associated residential garages located on the southern parcels of the Project Site (south of Bellwood Avenue) were issued. By 1952, the 12th residential building, located on the northern parcel (north of Bellwood Avenue) had been constructed. The Project Site has remained in the same configuration since 1952.

The adjoining properties were primarily undeveloped land and/or developed for residential use from as early as 1894 to 1938. From as early as 1948, gas and oil service stations were located on two properties north of the Project Site, and one western adjoining property. The gas and oil service stations on the easternmost northern adjoining property (10326 West Olympic Boulevard) appear to have operated from as early as 1948 to 1985. That property was redeveloped by 1989 with the existing hotel building. The gas and oil service station located on the westernmost northern adjoining property (10344 W. Olympic Boulevard) appears to have operated from as early as 1948 to at least 1995. That property was then occupied by auto service and smog businesses from as early as 2000 to 2006, and by Michael's Cleaners from as early as 2006 to the present. The gas and oil service station on the western adjoining property (10350 West Olympic Boulevard) appears to have operated from as early as 1948 to 1998, when the underground storage tanks (USTs) were removed. That site was redeveloped with the existing retail building in 2012. The western adjoining property located at 10390 Bellwood Avenue has been occupied by salon businesses from as early as 1995 to the present. The remaining adjoining properties have remained in residential use since first developed in the 1920s through the 1940s.

Additionally, as provided in the Geotechnical Investigation, based on a review of the California Division of Oil, Gas and Geothermal Resources (DOGGR) Well Finder Website (DOGGR, 2018), the Project Site is located within the Cheviot Hills Oil Field. However, as discussed in the Phase I ESA,

according to DOGGR there are no wells located on the Project Site or adjacent properties. The nearest well to the Project Site is the Chevron U.S.A. Inc Well Number 321F, an inactive and plugged oil and gas production well, located approximately 1,600 feet to the east (DOGGR, 2018). Due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map. As such, though not anticipated, undocumented wells could be encountered during construction of the Project, which would need to be properly abandoned in accordance with the current requirements of the DOGGR.

The identification of a former gas and oil service station, located at the easternmost northern adjoining property (10236 West Olympic Boulevard), is not considered a REC as the site has since been redeveloped with a hotel and underground parking garage. Similarly, the identification of a former gas and oil service station at the western adjoining property located at 10350 West Olympic Boulevard is not considered a REC as the property was issued a case-closed designation in 2009, and the property has been redeveloped. However, the former gas and oil service station and auto repair operations on the westernmost northern adjoining property (10344 West Olympic Boulevard), and the existing dry-cleaning operations and smog and oil-change operations on the property are considered RECs. Tetrachloroethylene (PCE) was detected as recently as 2007 in wells located downgradient of the drycleaners which indicates that dry-cleaning operations may have impacted groundwater beneath the drycleaners and adjoining properties (including the Project Site). In summary, the Phase I ESA identified the following RECs:

- The identified presence of tetrachloroethylene (PCE) in soil-vapor at levels in excess of screening levels for residential land use.
- The identification of a former gas and oil service station and auto repair business on the northern adjoining property (10344 West Olympic Boulevard).
- The identification of an existing dry-cleaning business (Michael's Cleaners) and smog check and oil change business on the northern adjoining property (10344-10344 1/2 West Olympic Boulevard).
- The Project Site is located within a Methane Zone.
- A vapor encroachment condition exists for the Project Site.

Based on the identified RECs, a Phase II ESA, included in Appendix IS-5 of this Initial Study, was prepared to further evaluate the impacts to soil and soil vapor beneath the Project Site due to past and current operations at the northern adjoining property. The Phase II ESA also included an initial screening to evaluate whether methane was present in soil-vapor. Provided below is a summary of the findings of the Phase II ESA as well as an evaluation of other potential hazardous materials that may be present on the Project Site during construction and operation of the Project.

Construction

Hazardous Waste Generation, Handling, and Disposal

During demolition, excavation, on-site grading, and building construction, hazardous materials such as fuel and oils associated with construction equipment, as well as coatings, paints, adhesives, and

caustic or acidic cleaners, could be used, and therefore, would require proper handling and management and, in some cases, disposal. The use, handling, storage, and disposal of these materials could increase the opportunity for hazardous materials releases and, subsequently, the exposure of people and the environment to hazardous materials. However, as previously discussed, all potentially hazardous materials used during construction of the Project would be used and disposed of in accordance with manufacturers' specifications and instructions, thereby reducing the risk of hazardous materials use. In addition, the Project would comply with all applicable federal, state, and local requirements concerning the use, storage, and management of hazardous materials. Consequently, Project construction activities would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of potentially hazardous materials used during construction.

As described above, a review of the State of California DOGGR Online Mapping System determined the Project Site is located within the Cheviot Hills Oil Field. However, as discussed in the Phase I ESA, according to DOGGR there are no wells located on the Project Site or adjacent properties. The nearest well to the Project Site is the Chevron U.S.A. Inc Well Number 321F, an inactive and plugged oil and gas production well, located approximately 1,600 feet to the east. Due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map. As such, though not anticipated, undocumented wells could be encountered during construction of the Project, which would need to be properly abandoned in accordance with the current requirements of the DOGGR. The Project Site is also located within a designated Methane Zone mapped by the City. Additionally, based on the RECs identified in the Phase I ESA, construction activities could encounter contaminated soil that would require proper handling and disposal.

As evaluated in the Phase II ESA, methane was detected in eight of the 12 soil vapor probes at a concentration of 0.1 percent (or 1,000 parts per million) during the initial round of monitoring conducted on May 1, 2018. It is noted that this concentration is equal to the minimum detection limit of the instrument, and that the meter was recalibrated prior to conducting the second round of readings on May 2, 2018. Methane was not detected in any of the soil vapor probes during the second screening. The soil vapor monitoring conducted at the Project Site did encounter tetrachloroethylene (PCE) and trichloroethylene (TCE) in excess of residential screening levels. However, the Phase II ESA determined that based on the levels encountered and implementation of applicable LADBS requirements, there would not be unacceptable health risk to occupants. In addition, adherence to standard construction safety measures, as well as compliance with California Occupational Safety and Health Act (OSHA) safety requirements, would serve to reduce the risk in the event that elevated levels of these soil gases are encountered during grading and construction.

As discussed in the Phase II ESA, in the soil samples analyzed, PCE was detected in just one sample at a concentration that is less than the residential screening level, and no other VOCs were detected in any of the samples analyzed. TPH in the heavy oil range was detected in three samples also below the residential screening level. TPH in the gasoline and diesel ranges were not detected in any of the soil samples. The likely source of the PCE concentration in soil is the adjacent dry-cleaning facility. The reported concentrations of oil range TPH could be related to the automotive service facilities on the north adjacent property. As concluded in the Phase II ESA, the soils at the Project Site do not appear to be significantly impacted and are believed to be acceptable for reuse onsite. In addition, based on the reported concentrations of VOCs and TPH in the soil samples analyzed, it is not anticipated that there would be any special handling or disposal requirements associated with soils that might be exported from

the Project Site during construction. In the event that contaminated soils are encountered during construction, or construction occurs in areas of known or potential contamination, the nature and extent of the contamination would be determined and appropriate handling, disposal, and/or treatment would be implemented in accordance with applicable regulatory requirements, including SCAQMD Rule 1166.[44] Therefore, compliance with existing regulations would ensure the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the handling and disposal of contaminated soil that may be encountered on-site.

Based on the above, construction of the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts associated with hazardous waste generation, handling, and disposal during construction would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

Underground and Aboveground Storage Tanks

According to the Phase I ESA, no evidence of existing USTs or ASTs was observed on the Project Site. No other records were found that indicate the presence of USTs within the areas proposed for construction. Notwithstanding, in the unlikely event that USTs are found, suspect materials would be removed in accordance with all applicable federal, state, and local regulations. For example, if underground storage tanks are encountered, prior to removal, applicable permits would be obtained from the LAFD. Therefore, with compliance with applicable regulations, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts related to the potential removal of USTs during construction would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

Asbestos-Containing Materials

Asbestos was widely used in the building industry starting in the late 1800s and up until the late 1970s for a variety of uses, including acoustic and thermal insulation and fireproofing, and is often found in ceiling and floor tiles, linoleum, pipes, structural beams, and asphalt. Any building, structure, surface asphalt driveway, or parking lot constructed prior to 1979 could contain asbestos or ACMs. Based on the age of the on-site buildings (i.e., constructed as early as 1940), asbestos-containing materials (ACMs) may be present on-site. Thus, in accordance with SCAQMD Rule 1403, the Project Applicant would be required to conduct a comprehensive asbestos survey prior to demolition, subject to approval by LADBS. In the event that ACMs are found within areas proposed for demolition, suspect materials would be removed by a certified asbestos abatement contractor in accordance with applicable regulations. With compliance with relevant regulations and requirements, Project construction activities would not expose people to a substantial risk resulting from the release of asbestos fibers into the environment. Therefore, with compliance with applicable regulations, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts related to the removal of ACMs during demolition

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[44] South Coast Air Quality Management District. Rules and Compliance, Rule 1166, http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1166.pdf?sfvrsn=4, accessed November 8, 2018.

would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

Lead-Based Paint

Lead is a naturally occurring element and heavy metal that was widely used as a major ingredient in most interior and exterior oil-based paints prior to 1950. Lead compounds continued to be used as corrosion inhibitors, pigments, and drying agents from the early 1950s to 1972, when the Consumer Products Safety Commission specified limits on lead content in such products. Based on the age of the on-site buildings, lead-based paint (LBP) may be present on-site. In the event that LBP is found within areas proposed for demolition, suspect materials would be removed in accordance with procedural requirements and regulations for the proper removal and disposal of LBP prior to demolition activities, including standard handling and disposal practices pursuant to OSHA regulations. Example procedural requirements include the use of respiratory protection devices while handling lead-containing materials, containment of lead or materials containing lead on the Project Site or at locations where construction activities are performed, and certification of all consultants and contractors conducting activities involving LBP or lead hazards. With compliance with relevant regulations and requirements, Project construction activities would not expose people to a substantial risk resulting from the release of LBP into the environment. Therefore, with compliance with applicable regulations, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts related to the removal of LBP during demolition would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

Polychlorinated Biphenyls

Typical sources of polychlorinated biphenyls (PCBs) include electrical transformer cooling oils, fluorescent light fixture ballasts, and hydraulic oil. In 1976, the USEPA banned the manufacture and sale of PCB-containing transformers. As discussed above, no items containing PCBs were observed on-site. In the event that PCBs are found within areas proposed for demolition, suspect materials would be removed in accordance with all applicable federal, state, and local regulations. Therefore, with compliance with applicable regulations, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts related to the removal of PCBs during demolition would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

Operation

Hazardous Waste Generation, Handling, and Disposal

As discussed above, the soil vapor monitoring conducted at the Project Site did encounter tetrachloroethylene (PCE) and trichloroethylene (TCE) in excess of residential screening levels. As concluded in the Phase II ESA, the soils at the Project Site do not appear to be significantly impacted and are believed to be acceptable for reuse on site. Specifically, the Phase II ESA determined that based on the levels encountered and implementation of applicable LADBS requirements, there would not be unacceptable health risks to occupants. In addition, operation of the Project Site would involve the routine use of small quantities of potentially hazardous materials typical of those used in residential and

commercial uses. As stated previously, activities involving the handling and disposal of hazardous wastes would occur in compliance with all applicable federal, state, and local requirements concerning the handling and disposal of hazardous waste. Therefore, with compliance with applicable regulations and requirements, operational activities would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts associated with hazardous waste generation, handling, and disposal during operation of the Project would be less than significant. No further analysis of this topic in an EIR is required.

Underground and Aboveground Storage Tanks

Development of the Project includes residential senior housing and associated uses. The Project does not propose the installation of underground or aboveground storage tanks. As such, operation of the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts associated with underground and aboveground storage tanks during operation of the Project would be less than significant. No further analysis of this topic in an EIR is required.

Asbestos-Containing Materials

Development of the Project would include the use of commercially-sold construction materials that would not include asbestos or ACMs. Project operation is, therefore, not anticipated to increase the occurrence of friable asbestos or ACMs at the Project Site. Therefore, operation of the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and no impacts associated with asbestos or ACMs during operation of the Project would occur. No further analysis of this topic in an EIR is required.

Lead-Based Paint

Development of the Project would include the use of commercially-sold construction materials that would not include LBP. Project operation is, therefore, not anticipated to increase the occurrence of LBP at the Project Site. Operation of the Project would not expose people to LBP as no LBPs would be used. Thus, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts associated with LBP during operation of the Project would not occur. No further analysis of this topic in an EIR is required.

Polychlorinated Biphenyls

In accordance with existing regulations which ban the manufacture of PCBs, the new electrical systems to be installed as part of the Project would not contain PCBs. Therefore, during operation of the Project, maintenance of such electrical systems would not expose people to PCBs and operation of the Project would not expose people to any risk resulting from the release of PCBs in the environment. Therefore, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into

the environment, and no impacts related to PCBs during Project operation would occur. No further analysis of this topic in an EIR is required.

Oil Wells and Methane Gas

Oil Wells

The Project does not include the installation of new oil wells. As such, operation of the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and no impacts associated with oil wells during operation would occur. No further analysis of this topic in an EIR is required.

Methane Gas

All new buildings and paved areas located within a Methane Zone would comply with the City of Los Angeles' Methane Mitigation Ordinance No. 175790. Under this ordinance, the Project Site is categorized as a Level II Site Design due to the presence of volatile organic compounds and methane in soil vapor sampling and would be required to implement methane mitigation controls accordingly. As the permitting process would ensure that new development would comply with the City's Methane Mitigation Ordinance, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts associated with the release of methane gas during operation would be less than significant. No further analysis of this topic in an EIR is required.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. There are no schools within one-quarter mile of the Project Site. However, the Project Site is located within 0.5 mile of Le Lycée Français De Los Angeles: Century City Campus at 10361 Pico Boulevard. Although the Project would have the potential to emit and would involve the handling of hazardous materials, particularly during construction activities, all such activities involving the handling and disposal of hazardous materials and wastes would occur in compliance with all applicable federal, state, and local requirements concerning the handling and disposal of hazardous waste. Therefore, with compliance with relevant regulations and requirements, the Project would not create a significant hazard to nearby schools, and impacts regarding the Project's emission or handling of hazardous materials and wastes would be less than significant. No mitigation measures and no further analysis of this topic in an EIR are required.

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?

Less Than Significant Impact. Section 65962.5 of the California Government Code requires the California Environmental Protection Agency to develop and update annually the Cortese List, which is a "list" of hazardous waste sites and other contaminated sites. While Section 65962.5 makes reference to the preparation of a "list," many changes have occurred related to web-based information access since

1992 and information regarding the Cortese List is now compiled on the websites of multiple agencies. The Phase I ESA for the Project Site obtained a database search report from Environmental Risk Information Services (ERIS), dated May 8, 2018, which is included as Appendix E of the Phase I ESA. The report documents findings of various federal, state, and local regulatory database searches regarding properties with known or suspected releases of hazardous materials or petroleum hydrocarbons. Based on the ERIS database records search, the Project Site is not listed on any hazardous materials or hazardous wastes databases. Therefore, impacts regarding this threshold would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The Project Site is not located within an airport land use plan or within 2 miles of an airport. The closest airport to the Project Site is the Santa Monica Municipal Airport, located approximately 2.8 miles southwest of the Project Site. Given the distance between the Project Site and the nearest airport, the Project would not result in a safety hazard or excessive noise for people residing or working in the Project area. Therefore, no impact would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. According to the Safety Element of the City of Los Angeles General Plan, the nearest disaster route to the Project Site is Olympic Boulevard, which is located approximately 70 feet to the north of the Project Site and provides arterial access and is in the immediate vicinity of the Project Site.[45] Adjacent to the Project Site, Bellwood Avenue is a u-shaped street that connects to Olympic Boulevard at each end. The Project Site includes parcels located generally north/west and east/south of Bellwood Avenue as well as the portion of Bellwood Avenue that bifurcates the Project Site. As described in Attachment A, Project Description, of this Initial Study, as part of the Project, the portion of Bellwood Avenue that bifurcates the Project Site would be vacated and realigned as a private street. However, access to Olympic Boulevard would be maintained from both sides of Bellwood Avenue, including during construction. As such, the Project would not impair emergency access to Olympic Boulevard. Impacts would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. There are no wildlands located in the vicinity of the Project Site. The Project Site is not located within a City-designated Very High Fire Hazard Severity Zone,[46] nor is it located within a

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[45] Los Angeles General Plan Safety Element, November 1996, Exhibit H, Critical Facilities and Lifeline Systems, p. 61.

[46] City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Report for APNs 4315018034, 4315018033, 4315018032, 4315018031, 4315018030, and 4315018029, http://zimas.lacity.org/, accessed November 13, 2018. The Very High Fire Hazard Severity Zone was first established in the City of Los Angeles in 1999 and replaced the older "Mountain Fire District" and "Buffer Zone" shown on Exhibit D of the Los Angeles General Plan Safety Element.

City-designated fire buffer zone.[47] Therefore, the Project would not exacerbate conditions that would subject people or structures to a significant risk of loss, injury, or death as a result of exposure to wildland fires. Furthermore, the Project would be developed in accordance with LAMC requirements pertaining to fire safety. Specifically, Section 57.106.5.2 of the LAMC provides that the Fire Chief shall have the authority to require drawings, plans, and sketches as necessary to identify access points, fire suppression devices and systems, utility controls, and stairwells; Section 57.118 of the LAMC establishes LAFD's fire/life safety plan review and LAFD's fire/life safety inspection for new construction projects; and Section 57.507.3.1 establishes fire water flow standards. Additionally, the proposed residential uses would not create a fire hazard that has the potential to exacerbate the current environmental condition relative to wildfires. Therefore, no impacts would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

X. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. impede or redirect flood flows?	☐	☐	☐	☒

[47] City of Los Angeles, Safety Element of the Los Angeles City General Plan, November 26, 1996, Exhibit D, p. 53.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

The following analysis is based, in part, on the *Hydrology and Water Quality Technical Memorandum* (Hydrology and Water Quality Memorandum) prepared for the Project by Fuscoe Engineering, Inc., dated May 2019 and included as Appendix IS-6 of this Initial Study.

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. As provided by the following analysis, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

Surface Water Quality

Construction

During Project construction, particularly during the grading phase, stormwater runoff from precipitation events could cause exposed and stockpiled soils to be subject to erosion and convey sediments into municipal storm drain systems. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. Pollutant discharges relating to the storage, handling, use and disposal of chemicals, adhesives, coatings, lubricants, and fuel could also occur. However, as Project construction would disturb more than one acre of soil, the Project would be required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. In accordance with the requirements of the NPDES Construction General Permit, the Project would implement a Stormwater Pollution Prevention Plan (SWPPP) adhering to the California Stormwater Quality Association BMP Handbook. The SWPPP would set forth Best Management Practices (BMPs) to be used during construction for stormwater and non-stormwater discharges, including, but not limited to, sandbags, storm drain inlets protection, stabilized construction entrance/exit, wind erosion control, and stockpile management, to minimize the discharge of pollutants in stormwater runoff during construction. In addition, Project construction activities would occur in accordance with City grading permit regulations (Chapter IX, Division 70 of the LAMC), such as the preparation of an erosion control plan, to reduce the effects of sedimentation and erosion.

As previously noted, below-grade parking would extend to a depth of approximately 30 feet. Data from the California Division of Mines and Geology indicate the historic high groundwater level on the

Project Site is greater than 40 feet below ground surface.[48] Therefore, Project construction activities are not expected to encounter groundwater which could require dewatering.[49] While dewatering during construction is not anticipated, in the event groundwater is encountered during construction, temporary dewatering systems such as dewatering tanks, sand media particulate, pressurized bag filters, and cartridge filters would be utilized in compliance with the NPDES permit. These temporary systems would comply with all relevant NPDES requirements related to construction and discharges from dewatering operations.

With the implementation of site-specific BMPs included as part of the SWPPP and implementation of an erosion control plan as required by the LAMC, the Project would reduce or eliminate the discharge of potential pollutants from stormwater runoff. Therefore, with compliance with NPDES requirements and City of Los Angeles grading permit regulations, construction of the Project would not result in discharges that would violate any surface water quality standard or waste discharge requirements. Thus, temporary construction-related impacts on surface water quality would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

Operation

Under the City's LID Ordinance, post-construction stormwater runoff from new projects must be infiltrated, evapotranspirated, captured and used, and/or treated through high efficiency BMPs onsite for the volume of water produced by the 85th percentile storm event. Consistent with LID requirements to reduce the quantity and improve the quality of rainfall runoff that leaves the Project Site, the Project would include the installation of capture and use or biofiltration planter BMPs as established by the LID Manual. The installed BMP systems would be designed with an internal bypass overflow system to prevent upstream flooding during major storm events. As the majority of potential contaminants are anticipated to be contained within the "first flush" 85th percentile storm event, major storms are not anticipated to cause an exceedance of regulatory standards.

As is typical of most urban developments, stormwater runoff from the Project Site has the potential to introduce pollutants into the stormwater system. Anticipated and potential pollutants generated by the Project include sediment, nutrients, pesticides, pathogens, trash and debris, oil and grease, and metals. The implementation of BMPs required by the City's LID Ordinance would target these pollutants that could potentially be carried in stormwater runoff. As discussed in the Hydrology and Water Quality Memorandum, the existing Project Site does not have any structural or LID BMPs to treat or infiltrate stormwater. Therefore, implementation of the LID features proposed as part of the Project would result in an improvement in surface water quality runoff as compared to existing conditions. Implementation of the proposed BMP system would result in the treatment of the entire required volume for the Project Site and the elimination of pollutant runoff up to the 85th percentile storm event. Therefore, with the incorporation of LID BMPs, operation of the Project would not result in discharges that would violate any surface water quality standards or waste discharge requirements. Impacts to surface water quality during operation of the Project would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

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48 State of California, California Geological Survey, Seismic Hazard Zones. Beverly Hills Quadrangle, March 25, 1999.

49 Dewatering operations are practices that discharge non-stormwater from a work location into a drainage system to proceed with construction. Discharges from dewatering operations can contain high levels of fine sediments, which, if not properly treated, could lead to exceedance of the NPDES requirements.

Groundwater Quality

Construction

As discussed above, based on the historically highest groundwater level and depth of proposed excavation, Project construction activities are not expected to encounter groundwater and temporary dewatering is not expected to be required. In the event groundwater is encountered during construction, temporary dewatering systems such as dewatering tanks, sand media particulate, pressurized bag filters, and cartridge filters would be utilized in compliance with the NPDES permit. These temporary systems would comply with all relevant NPDES requirements related to construction. As such, groundwater quality would not be impacted from dewatering activities.

Other potential effects to groundwater quality could result from the presence of an underground storage tank (UST) or during the removal of an UST. As previously described, no existing USTs are anticipated to be found beneath the Project Site that could require removal during construction. Therefore, the removal of USTs would not pose a significant hazard on groundwater quality.

There are also risks associated with oil wells impacting groundwater quality. As discussed in detail above, according to the State of California Department of Conservation's Division of Oil, Gas, and Geothermal Resources (DOGGR) Online Mapping System, the Project Site is located within the Cheviot Hills Oil Field. However, as discussed in the Phase I ESA, according to DOGGR there are no wells located on the Project Site or adjacent properties, and the nearest well to the Project Site is the Chevron U.S.A. Inc Well Number 321F, an inactive and plugged oil and gas production well, located approximately 1,600 feet to the east of the Project Site. Due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map. As such, although not anticipated, undocumented wells could be encountered during construction of the Project, which would need to be properly abandoned in accordance with the current requirements of the DOGGR. Additionally, based on the RECs identified in the Phase I ESA, construction activities could encounter contaminated soil that would require proper handling and disposal. If located, wells would be unearthed and inspected by the DOGGR to assess and prescribe abandonment procedures based on their observed condition. Furthermore, in the event contaminated soils are encountered during construction, the nature and extent of the contamination would be determined and appropriate handling, disposal, and/or treatment would be implemented in accordance with applicable regulatory requirements, including SCAQMD Rule 1166.[50] Therefore, compliance with existing regulations would ensure the Project would not create a significant hazard to groundwater quality associated with potential oil wells and/or contaminated soil.

As previously discussed, during on-site grading and building construction, hazardous materials, such as fuels, oils, paints, solvents, and concrete additives, could be used and would therefore require proper management and, in some cases, disposal. The management of any resultant hazardous wastes could increase the potential for hazardous materials to be released into groundwater. Compliance with all applicable federal, state, and local requirements concerning the handling, storage and disposal of hazardous waste would reduce the potential for the construction of the Project to release contaminants into groundwater. In addition, as there are no existing groundwater production wells or public water

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[50] South Coast Air Quality Management District. Rules and Compliance, Rule 1166, http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1166.pdf?sfvrsn=4, accessed November 8, 2018.

supply wells within one mile of the Project Site, construction activities would not be anticipated to affect existing wells.

Based on the above, construction of the Project would not result in discharges that would violate any groundwater quality standard or waste discharge requirements. Therefore, construction-related impacts on groundwater quality would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

Operation

Operational activities which could affect groundwater quality include spills of hazardous materials and leaking USTs. Surface spills from the handling of hazardous materials most often involve small quantities and are cleaned up in a timely manner, thereby resulting in little threat to groundwater. Other types of risks such as leaking underground storage tanks have a greater potential to affect groundwater. However, as discussed above, the Project would not introduce any new USTs that would have the potential to expose groundwater to contaminants. In addition, the Project would comply with all applicable existing regulations that would prevent the Project from affecting or expanding any potential areas of contamination, increasing the level of contamination, or causing regulatory water quality standards at an existing production well to be violated, as defined in the California Code of Regulations, Title 22, Division 4, Chapter 15 and the Safe Drinking Water Act. Therefore, operation of the Project would not result in discharges that would violate any groundwater quality standard or waste discharge requirements. The Project's potential impact on groundwater quality during operation would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. As discussed above, based on the historically highest groundwater level and depth of proposed excavation, Project construction activities are not expected to encounter groundwater and temporary dewatering would not be required. In addition, dewatering during operation is also not anticipated. As such, the Project would not substantially deplete groundwater supplies as a result of dewatering activities.

With regard to groundwater recharge, the percolation of precipitation that falls on pervious surfaces is variable, depending on the soil type, condition of the soil, vegetative cover, and other factors. According to the Hydrology and Water Quality Memorandum, the Project Site is comprised of approximately 89 percent impervious surfaces under existing conditions. Therefore, the degree to which surface water infiltration and groundwater recharge would occur on-site is negligible. With implementation of the Project, the amount of landscaped area would increase, resulting in a decrease in the amount of impervious surfaces on the Project Site to approximately 87 percent. The increase in pervious areas would improve the groundwater recharge capacity of the Project Site over existing conditions. Therefore, the Project would not interfere substantially with groundwater recharge such that groundwater management would be impeded.

Based on the above, the Project would not substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in the aquifer volume or lowering of the

local groundwater table level. Therefore, impacts on groundwater supplies would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation on- or off-site;

Less Than Significant Impact. Construction activities for the Project would involve removal of the existing structures and associated hardscape as well as the excavation and removal of soil. These activities have the potential to temporarily alter existing drainage patterns on the Project Site by exposing the underlying soils, modifying flow direction, and making the Project Site temporarily more permeable. Exposed and stockpiled soils could also be subject to erosion and conveyance into nearby storm drains during storm events. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. However, as discussed above in Response to Checklist Question X.a, the Project would be required to obtain coverage under the NPDES Construction General Permit. In accordance with the requirements of this permit, the Project would implement a SWPPP that specifies BMPs and erosion control measures to be used during construction to manage runoff flows. These BMPs are designed to contain stormwater or construction watering on the Project Site such that runoff does not impact off-site drainage facilities or receiving waters. In addition, Project construction activities would occur in accordance with City grading permit regulations (Chapter IX, Division 70 of the LAMC), such as the preparation of an erosion control plan, to reduce the effects of sedimentation and erosion. Thus, through compliance with all NPDES Construction General Permit requirements, including preparation of a SWPPP and implementation of BMPs, as well as compliance with applicable City grading permit regulations, construction activities for the Project would not substantially alter the Project Site drainage patterns in a manner that would result in substantial erosion or siltation on- or off-site. As such, construction-related impacts to hydrology would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

The Project Site is comprised of approximately 89 percent impervious surfaces under existing conditions. With implementation of the Project, the amount of landscaped area would increase, resulting in a decrease in the amount of impervious surfaces on the Project Site to approximately 87 percent. As such, similar to existing conditions, there would be a limited potential for erosion or siltation to occur from exposed soils or large expanses of pervious areas. Therefore, the Project would not substantially alter the existing drainage pattern of the Project Site or surrounding area such that substantial erosion or siltation on-site or off-site would occur. Operational impacts to hydrology would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

Less Than Significant Impact. There are no streams or rivers within or immediately surrounding the Project Site. Construction activities for the Project would involve removal of the existing structures and associated hardscape as well as the excavation and removal of soil. These activities have the potential to temporarily alter existing drainage patterns on the Project Site by exposing the underlying soils, modifying flow direction, and making the Project Site temporarily more permeable. As discussed above in Response to Checklist Question X.a, the Project would be required to obtain coverage under the

NPDES Construction General Permit. In accordance with the requirements of this permit, the Project would implement a SWPPP that specifies BMPs and erosion control measures to be used during construction to manage runoff flows. These BMPs are designed to contain stormwater or construction watering on the Project Site such that runoff does not impact off-site drainage facilities or receiving waters. Thus, through compliance with all NPDES Construction General Permit requirements, including preparation of a SWPPP and implementation of BMPs, as well as compliance with applicable City grading permit regulations, construction activities for the Project would not substantially alter the Project Site drainage patterns in a manner that would result in flooding on- or off-site. As such, construction-related impacts to hydrology would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

As discussed in the Hydrology and Water Quality Memorandum, the Project Site is comprised of approximately 89 percent impervious surfaces under existing conditions. With implementation of the Project, the amount of landscaped area would increase, resulting in a decrease in the amount of impervious surfaces on the Project Site to approximately 87 percent. This increase in pervious surfaces would result in a reduction in stormwater runoff. Accordingly, there would be no increase in runoff volumes into the existing storm drain system. Therefore, the Project would not substantially alter the existing drainage pattern of the Project Site or surrounding area such that on-site or off-site flooding would occur. Operational impacts to hydrology would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Less Than Significant Impact. As discussed in the Hydrology and Water Quality Memorandum, stormwater runoff from the Project Site is collected and conveyed on Bellwood Avenue, where water flows in a northwest direction into two catch basins. These two catch basins flow westerly into a 63-inch storm drain that runs parallel to Olympic Boulevard. As discussed above, development of the Project would result in an increase in the landscaped areas throughout the Project Site and would reduce the amount of impervious surfaces on the Project Site from approximately 89 percent to approximately 87 percent. Accordingly, there would be a decrease in runoff volumes into the existing storm drain system. In addition, the implementation of BMPs required by the City's LID Ordinance would target runoff pollutants that could potentially be carried in stormwater runoff. Therefore, the Project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

iv. Impede or redirect flood flows?

No Impact. The Project Site is not located within a 100-year flood hazard area as mapped by the Federal Emergency Management Agency (FEMA) or by the City of Los Angeles.[51,52] Thus, the Project

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[51] Federal Emergency Management Agency, Flood Insurance Rate Map, Panel Number 06037C1595F, effective September 26, 2008.

[52] City of Los Angeles, Safety Element of the Los Angeles City General Plan, November 26, 1996, Exhibit F, p. 57.

would not impede or redirect flood flows. No impacts would occur, and no mitigation measures would be required. No further analysis of this topic in an EIR is required.

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. As discussed above, the Project Site is not located within a 100-year flood hazard area as mapped by the Federal Emergency Management Agency (FEMA) or by the City of Los Angeles.[53,54] In addition, the Safety Element of the City of Los Angeles General Plan does not map the Project Site as being located within a flood control basin or within a potential inundation area.[55] The Project Site is located approximately six miles east of the Pacific Ocean, and the Safety Element of the General Plan does not map the Project Site as being located within an area potentially affected by a tsunami.[56] Therefore, no tsunami or tsunami events would be expected to impact the Project Site. No impacts would occur, and no mitigation measures would be required. No further evaluation of this topic in an EIR is required.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. Under Section 303(d) of the Clean Water Act, states are required to identify water bodies that do not meet their water quality standards. Biennially, the Los Angeles Regional Water Quality Control Board (LARWQCB) prepares a list of impaired waterbodies in the region, referred to as the 303(d) list. The 303(d) list outlines the impaired waterbody and the specific pollutant(s) for which it is impaired. All waterbodies on the 303(d) list are subject to the development of a Total Maximum Daily Load (TMDL). As discussed in the Hydrology and Water Quality Memorandum, the Project Site is located within the Ballona Creek Watershed. The County of Los Angeles, the City of Los Angeles, and all other cities in the Los Angeles Watershed are responsible for the implementation of watershed improvement plans or Enhanced Watershed Management Programs (EWMP) to improve water quality and assist in meeting the Total Maximum Daily Load (TMDL) milestones. A draft EWMP for the Ballona Creek Watershed, prepared with the City of Los Angeles as the lead coordinating agency, is in the process of review by the LARWQCB. The objective of the EWMP Plan is to determine the network of control measures (often referred to as best management practices [BMPs]) that will achieve required pollutant reductions while also providing multiple benefits to the community and leveraging sustainable green infrastructure practices. The Project Site, located in the Sepulveda Channel Sub-watershed, falls within the Ballona Creek EWMP and ultimately discharges into Reach 2 of Ballona Creek. According to the State Water Resources Control Board (SWRCB), Ballona Creek Reach 2, which is between National Boulevard and Centinela Avenue, is listed as an impaired water body. Impairments for Ballona Creek Reach 2 include trash, toxic pollutants, bacteria, metals, and sediment.

Potential pollutants generated by the Project would be typical of residential land uses and may include sediment, nutrients, pesticides, pathogens, trash and debris, oil and grease, and metals. The

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53 Federal Emergency Management Agency, Flood Insurance Rate Map, Panel Number 06037C1595F, effective September 26, 2008.

54 City of Los Angeles, Safety Element of the Los Angeles City General Plan, November 26, 1996, Exhibit F, p. 57.

55 Los Angeles General Plan Safety Element, November 1996, Exhibit G, Inundation & Tsunami Hazard Areas, p. 59.

56 City of Los Angeles, Safety Element of the Los Angeles City General Plan, November 26, 1996, Exhibit G, p. 59.

implementation of BMPs required by the City's LID Ordinance would target these pollutants that could potentially be carried in stormwater runoff. Since the existing Project Site does not have any structural or LID BMPs to treat or infiltrate stormwater, implementation of the LID features proposed as part of the Project would result in an improvement in surface water quality runoff as compared to existing conditions. As such, the Project would not introduce new pollutants or an increase in pollutants that could conflict with or obstruct any water quality control plans for Ballona Creek. In addition, development of the Project would result in an increase in the landscaped areas throughout the Project Site and would reduce the amount of impervious surfaces, from approximately 89 percent to approximately 87 percent. The increase in pervious areas would improve the groundwater recharge capacity of the Project Site over existing conditions. Since the Project's LID BMP design is for biofiltration, treated runoff would be discharged into the storm drain system, away from the structures and groundwater table.

With compliance with existing regulatory requirements and implementation of LID BMPs, the Project would not conflict with or obstruct implementation of a water quality control plan or a sustainable groundwater management plan. Impacts would be less than significant, and no mitigation measures would be required. No further evaluation of this topic in an EIR is required.

XI. LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☒	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐

a. Physically divide an established community?

Less than Significant Impact. As discussed in Section 3, Project Description, of this Initial Study, the Project Site includes parcels located generally north/west and east/south of Bellwood Avenue. The Project Site is currently developed with three multi-family residential developments and includes the portion of Bellwood Avenue that bifurcates the Project Site. Bellwood Avenue is a u-shaped street that connects to Olympic Boulevard at each end. The Project would replace the existing multi-family residential uses within the Project Site with a new residential eldercare facility. Additionally, as part of the Project, the portion of Bellwood Avenue that bifurcates the Project Site would be vacated and realigned as a private street. However, through access would be maintained, and access to Olympic Boulevard from adjacent properties along Bellwood Avenue would continue to be available. In addition, the Project does not propose a freeway or other large infrastructure that would divide the existing surrounding community. Therefore, the Project would not physically divide an established community. Impacts related to the physical division of an established community would be less than significant, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Potentially Significant Impact. The Project Site is located within the R3-1 and C2-1VL Zones with a Neighborhood Commercial land use designation under the West Los Angeles Community Plan and the City's General Plan. The Project's proposed Eldercare Facility use is permitted within the C2 zone. In the R3 zone, Senior Independent Living and Assisted Living Care are permitted uses, and Alzheimer's/Dementia Care Housing and Eldercare Facilities are permitted with an Eldercare Facility Unified Permit pursuant to LAMC Section 14.3.1 (Public Benefits) . Thus, in conjunction with the approval of the Eldercare Facility Unified Permit, the Project would be consistent with the existing zoning and land use designation of the Project Site, and the Project does not require a Zone Change or a General Plan Amendment. While the Project would not be anticipated to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, the EIR will provide further analysis of the Project's consistency with applicable land use plans, policies, and regulations that were adopted for the purpose of avoiding or mitigating an environmental effect.

XII. MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. No mineral extraction operations currently occur on the Project Site. Furthermore, the Project Site is not located within a City-designated Mineral Resource Zone where significant mineral deposits are known to be present, or within a mineral producing area as classified by the California Geologic Survey.[57,58,59] The Project Site is, however, located within a City-designated oil field or oil drilling area.[60] In addition, as discussed in Attachment A, Project Description, of this Initial Study, the Project Site's zoning indicates the Project Site is located within an Oil Drilling District where the drilling of oil wells

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57 City of Los Angeles, Department of City Planning, Los Angeles Citywide General Plan Framework, Draft Environmental Impact Report, January 19, 1995. Figure GS-1.

58 State of California Department of Conservation, California Geologic Survey, Aggregate Sustainability in California, 2012.

59 City of Los Angeles, Conservation Element of the Los Angeles City General Plan, January 2001, Exhibit A, p. 86.

60 City of Los Angeles, Safety Element of the Los Angeles City General Plan, November 26, 1996, Exhibit E, p. 55.

or the production from the wells of oil, gases, or other hydrocarbon substances is permitted. According to the California Division of Oil, Gas and Geothermal Resources (DOGGR), the Project Site is also located within the limits of the Cheviot Hills Oil Field.[61] However, as discussed in the Phase I ESA, according to DOGGR there are no wells located on the Project Site or adjacent properties. The nearest known oil well is located approximately 1,600 feet east of the Project Site, and this oil well is currently inactive and plugged. Furthermore, the Project Site does not currently include any oil drilling activities. Therefore, the Project would not result in the loss of availability of a mineral resource or a mineral resource recovery site. No impact would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. No mineral extraction operations currently occur on the Project Site. Furthermore, the Project Site is not located within a City-designated Mineral Resource Zone where significant mineral deposits are known to be present, or within a mineral producing area as classified by the California Geologic Survey.[62,63,64] While the Project Site is located within a City-designated oil field or oil drilling area[65] as well as within the limits of the Cheviot Hills Oil Field,[66] according to DOGGR there are no wells located on the Project Site or adjacent properties, and the nearest known oil well is approximately 1,600 feet east of the Project Site and is currently inactive and plugged. Therefore, the Project would not result in the loss of availability of a mineral resource or a mineral resource recovery site. No impact would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

XIII. NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐

61 California Department of Conservation, Division of Oil, Gas and Geothermal Resources, 2018, Well Finder, https://maps.conservation.ca.gov/doggr/wellfinder/#close, accessed November 13, 2018.

62 City of Los Angeles, Department of City Planning, Los Angeles Citywide General Plan Framework, Draft Environmental Impact Report, January 19, 1995. Figure GS-1.

63 State of California Department of Conservation, California Geologic Survey, Aggregate Sustainability in California, 2012.

64 City of Los Angeles, Conservation Element of the Los Angeles City General Plan, January 2001, Exhibit A, p. 86.

65 City of Los Angeles, Safety Element of the Los Angeles City General Plan, November 26, 1996, Exhibit E, p. 55.

66 California Department of Conservation, Division of Oil, Gas and Geothermal Resources, 2018, Well Finder, https://maps.conservation.ca.gov/doggr/wellfinder/#close, accessed November 13, 2018.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Potentially Significant Impact. During construction activities associated with the Project, the use of heavy equipment (e.g., bulldozers, backhoes, cranes, loaders, etc.) would generate noise on a short-term basis. In addition, noise levels from on-site sources may increase during operation of the Project. Furthermore, traffic attributable to the Project has the potential to increase noise levels along adjacent roadways. Therefore, further evaluation of this topic will be provided in the EIR.

b. Generation of excessive groundborne vibration or groundborne noise levels?

Potentially Significant Impact. Construction of the Project could generate groundborne noise and vibration associated with demolition, site grading and excavation, other clearing activities, the installation of building footings, and construction truck travel. As such, the Project would have the potential to generate excessive groundborne vibration and noise levels during short-term construction activities. Therefore, further evaluation of this topic will be provided in the EIR.

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The Project Site is not located within the vicinity of a private airstrip or an airport land use plan or within 2 miles of an airport. The closest airport to the Project Site is the Santa Monica Municipal Airport, located approximately 2.8 miles southwest of the Project Site. Given the distance between the Project Site and the nearest airport, the Project would not expose people residing or working in the Project area to excessive noise levels. Therefore, no impact would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

XIV. POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☒	☐	☐	☐

a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact. The Project would remove three existing multi-family residential developments with a total of 112 residential units and would construct 192 senior housing residential units, including 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms. While the Project would result in a net increase of 80 residential units compared to existing conditions, the proposed type of units are not typically associated with a substantial increase in population growth. Specifically, the Project proposes 46 studio guest rooms, 94 one-bedroom dwelling units, and 52 two-bedroom dwelling units, and as an eldercare facility, the Project would be for persons age 62 and older. Assuming occupancy of one person per bedroom, the Project would provide housing to approximately 244 people. The actual net increase in population would be less with the replacement of the existing residential units. Therefore, the Project would not induce substantial population growth in the area. With regard to infrastructure, all circulation improvements planned as part of the Project are intended to improve circulation flows and safety throughout the Project Site and vicinity. Any utility and other infrastructure improvements that may be required by the Project would be necessary to connect the proposed uses to the existing main infrastructure system. Therefore, the Project also would not indirectly induce substantial unplanned population growth in the area. Impacts related to population growth would be less than significant, and no mitigation measures are required. No further analysis of this topic in an EIR is required.

b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Potentially Significant Impact. The Project Site is currently developed with three multi-family residential developments with a total of 112 units that would be removed as part of the Project. The Project would construct 192 senior housing residential units, including 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms, resulting in a net increase of 80 residential units compared to existing conditions. As an eldercare facility, the Project would provide a different type of residential use than the existing buildings at the Project Site. Eldercare facilities serve a

senior population while the existing housing units are not age-restricted. Therefore, further analysis of this topic will be included in the EIR.

XV. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Fire protection?	☒	☐	☐	☐
b. Police protection?	☒	☐	☐	☐
c. Schools?	☐	☐	☒	☐
d. Parks?	☐	☐	☒	☐
e. Other public facilities?	☐	☐	☒	☐

a. Fire protection?

Potentially Significant Impact. The City of Los Angeles Fire Department (LAFD) provides fire protection and emergency medical services for the Project Site. The Project would increase the building square footage on-site and would introduce a new residential type, eldercare residential facility, which could result in the need for additional fire protection services. Therefore, further analysis of this issue will be included in the EIR.

b. Police protection?

Potentially Significant Impact. Police protection for the Project Site is provided by the City of Los Angeles Police Department. The Project would introduce a new residential type to the Project Site, eldercare residential facility, which could result in the need for additional police services. Therefore, the EIR will provide further analysis of this issue.

c. Schools?

Less Than Significant Impact. The Project Site is located within the boundaries of the Los Angeles Unified School District (LAUSD). LAUSD is divided into six local districts.[67] The Project Site is

[67] Los Angeles Unified School District, Board of Education Districts Maps 2015-2016, http://achieve.lausd.net/Page/8652, accessed December 13, 2018.

located in Local District–West.[68] The nearest school to the Project Site is Westwood Charter Elementary, located approximately 0.9 mile southwest of the Project Site at 2050 Shelby Avenue. As discussed in Attachment A, Project Description, of this Initial Study, the Project would construct an eldercare facility for persons 62 years of age or older that would include 192 senior housing residential units. While the Project would include residential uses, these residential uses are not the types of residential uses that would generate school-aged children and a corresponding demand for school services in the vicinity of the Project Site. Therefore, the development of the Project would not directly increase the number of students within the service area of LAUSD. In addition, the number of students that may be indirectly generated by the Project that could attend LAUSD schools serving the Project Site would not be anticipated to be substantial because not all employees of the Project are likely to reside in the vicinity of the Project Site. Furthermore, pursuant to Senate Bill 50, the Applicant would be required to pay development fees for schools to LAUSD prior to the issuance of the Project's building permit. Pursuant to Government Code Section 65995, the payment of these fees fully removes Project-related school impacts. Thus, the Project would not result in the need for new or altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service. Therefore, impacts would be less than significant, and no mitigation measures are required. No further analysis of this issue in an EIR is required.

d. Parks?

Less Than Significant Impact. Parks and recreational facilities in the vicinity of the Project Site are primarily operated and maintained by the Los Angeles Department of Recreation and Parks (RAP). The closest park and recreational facility to the Project Site is the Cheviot Hills Recreation Center, located approximately 0.8 mile southeast of the Project Site at 2551 Motor Avenue. The Cheviot Hills Recreation Center includes a swimming pool, tennis courts, a playground, an archery range, classes for children and adults, and an 18-hole golf course. As previously described, the Project would involve the construction of an eldercare facility for persons 62 years of age or older that would include 192 residential units consisting of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms. This type of use is not typically associated with a substantial increase in the use of nearby parks as many of the residents rely on some form of care. Rather, these types of facilities generally provide a wide variety of activities and amenities onsite. Specifically, as described in Attachment A, Project Description, of this Initial Study, the Project would provide 14,630 square feet of usable common and private open space, exceeding the LAMC-required amount of open space of 7,800 square feet . The proposed open space amenities include a 6,490 square foot courtyard on Level P1 and a 2,740 square-foot terrace on the ground level. The P1 level would also provide 27,532 square feet of indoor common areas including a wellness center, gym, indoor pool and spa, common dining areas, and activity rooms. In addition, an outdoor terrace would be provided on each level between Level 2 and Level 6 for assisted living and independent living residents. Therefore, due to the amount, variety, and availability of the proposed open space and recreational amenities to be provided within the Project Site, it is anticipated that Project residents would utilize the on-site open space and common areas to meet their recreational needs.

In addition, while it is possible that some of the Project's new employees may utilize local parks and recreational facilities, this increased demand would be negligible due to the nature of the employee's work. It is anticipated that the majority of Project employees, such as nurses, social workers, and

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[68] Los Angeles Unified School District, Board of Education Local District—West Map, July 2015.

caretakers, would be more likely to use parks and recreational facilities near their homes during non-work hours. Furthermore, it is anticipated that some of the employment opportunities generated by the Project would be filled by people already residing in the vicinity of the Project Site and who already generate a demand for parks. As such, the potential indirect growth in demand for parks and recreational facilities would be minimal.

Based on the above, the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered parks or the need for new or physically altered parks. Impacts would be less than significant, and no mitigation measures are required. No further analysis of this issue in an EIR is required.

e. Other public facilities?

Less Than Significant Impact. Other public facilities available include libraries. The Los Angeles Public Library (LAPL) provides library services to the City of Los Angeles through its Central Library, eight regional branch libraries, and 64 neighborhood branch libraries, as well as through Web-based resources.[69] The Project area is served by existing libraries within the West Los Angeles Community Plan area, including the Palms-Rancho Park Branch Library, located 1.8 miles south of the Project Site.

As discussed in Attachment A, Project Description, of this Initial Study, the Project would result in the removal of three existing multi-family residential developments with a total of 112 dwelling units. The Project's proposed 192 residential units would be comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms. Based on the type of residential uses proposed, the Project would not be expected to generate a substantial increase in the use of the Palms-Rancho Park Branch Library. Rather, the demand on library services may actually decrease as not all residents would be physically able to travel to the library. In addition, as Project employees would be more likely to use library facilities near their homes during non-work hours and given that some of the employment opportunities generated by the Project would be filled by people already residing in the vicinity of the Project Site, Project employees and the potential indirect population generation that could be attributable to those employees would generate minimal demand for library services. As such, any direct or indirect demand for library services generated by Project employees would be negligible. The Project would not substantially increase the demand for library facilities and would not require the provision of new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service. Therefore, impacts on library facilities would be less than significant, and no mitigation measures are required. No further analysis of this issue in an EIR is required.

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[69] Los Angeles Public Library, Library Directory.

XVI. RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

a. Would the project Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?

Less Than Significant Impact. There are numerous public parks and recreational facilities within 2 miles of the Project Site. The closest major park to the Project Site is Cheviot Hills Recreation Center, which includes a swimming pool, tennis courts, a playground, an archery range, classes for children and adults, and an 18-hole golf course. It is located approximately 0.8 mile southeast of the Project Site. As previously described, the Project would involve the construction of an eldercare facility for persons 62 years of age or older that would include 192 residential units consisting of 71 senior-independent dwelling units, 75 assisted-living guest rooms, and 46 memory-care guest rooms. This type of use is not typically associated with a substantial increase in the use of nearby parks and recreational facilities as many of the residents rely on some form of care and a wide variety of activities and amenities are provided on site. As discussed above, the Project's demand for parks and recreational facilities would be offset by the 14,630 square feet of usable open space that would be provided on-site. Due to the nature of the eldercare facility use, and the amount and availability of the proposed open space and recreational amenities within the Project, it is anticipated that Project residents would generally utilize on-site open space and common areas to meet their recreational needs. Thus, while some of the Project's residents may be expected to utilize off-site public parks and recreational facilities to some degree, the Project would not substantially increase the demand for off-site public parks and recreational facilities such that substantial physical deterioration of those facilities would occur or be accelerated. The impact on parks and recreational facilities would be less than significant and mitigation measures would not be required. No further evaluation of this topic in an EIR is required.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less Than Significant Impact. The Project would not include the construction of recreational facilities or require the expansion of recreational facilities, as discussed above in Response Checklist Question XIV.d. Thus, impacts would be less than significant, and no mitigation measures are required. No further analysis of this issue in an EIR is required.

XVII. TRANSPORTATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☒	☐	☐	☐
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐	☐	☐
d. Result in inadequate emergency access?	☒	☐	☐	☐

a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Potentially Significant Impact. Construction of the Project has the potential to affect the transportation system through the hauling of excavated materials and debris, the transport of construction equipment, the delivery of construction materials, and travel by construction workers to and from the Project Site. Once construction is completed, the majority of the 192 senior housing residential units provided by the Project would be occupied by residents in greater need of on-site services and care. As such, these residents would be less likely to use the area's transportation and parking facilities. Nonetheless, the Project's employees and visitors would generate vehicle and transit trips throughout the day. The resulting increase in the use of the area's transportation facilities could conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Therefore, further analysis of this issue will be provided in the EIR.

b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?[70]

[70] While this Appendix G Checklist Question has been modified by the Natural Resources Agency to address consistency with CEQA Guidelines section 15064.3, subdivision (b), which relates to use of the vehicle miles travelled (VMT) as the methodology for evaluating traffic impact, the City has not yet adopted a VMT methodology to address this updated Appendix

Potentially Significant Impact. As previously discussed, the proposed eldercare facility residents would be less likely to use the area's transportation facilities compared to existing residents. Nonetheless, the Project's employees and visitors would generate vehicle trips throughout the day. As such, this topic will be further evaluated in the EIR. The analysis would be based on LADOT's adopted methodology under its Transportation Impact Study Guidelines, which requires use of level of service (LOS) to evaluate the traffic impacts of a project.

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant Impact. As discussed in Attachment A, Project Description, of this Initial Study, as part of the Project, the portion of Bellwood Avenue that bifurcates the Project Site would be realigned as a private street. Generally, Bellwood Avenue serves as vehicular access to the lots that comprise the Project Site. There are also five commercial uses, four of which front onto Olympic Boulevard, that currently have driveway access on Bellwood Avenue. The Project would not result in any change to the existing access to these commercial properties on Bellwood Avenue or to the public street segments of Bellwood Avenue adjacent to these properties. The portion of Bellwood Avenue that bifurcates the Project Site would be replaced with a private drive and entry motor court that provides access to the proposed eldercare facility. The private drive is designed to allow for continued through access from both sides of Bellwood Avenue for pedestrians and vehicles, with a vehicle turn out located adjacent to the facility's lobby entrance for convenient pick-up and drop-off. As noted above, through access would be maintained from both sides of Bellwood Avenue through the Project Site, and the existing intersections of Bellwood Avenue and Olympic Boulevard would not be affected by the proposed realignment. The proposed realignment would not introduce any sharp curves or involve incompatible uses. Further, the proposed realignment of Bellwood Avenue would be subject to review and approval of the Los Angeles Department of Transportation and Bureau of Engineering. Thus, potential impacts related to a substantial increase in hazards due to a geometric design feature or incompatible uses would be less than significant and mitigation measures would not be required. No further evaluation of this topic in an EIR is required.

d. Result in inadequate emergency access?

Potentially Significant Impact. According to the Safety Element of the City of Los Angeles General Plan, the nearest disaster route to the Project Site is Olympic Boulevard, which is approximately 70 feet north of the Project Site and provides arterial access to the Project Site and surrounding uses.[71] While it is expected that construction activities for the Project would primarily be confined on-site, the Project's construction activities may potentially cause the closure of travel lanes in adjacent off-site streets for the installation or upgrading of local infrastructure. Construction within these roadways has the potential to impede access to adjoining uses, as well as reduce the rate of flow of the affected roadway. The Project would also generate construction traffic, particularly haul trucks, which may affect the capacity of adjacent streets and highways. In addition, as part of the Project, existing site access would be modified. Therefore, further analysis of this issue will be provided in the EIR.

G Checklist Question. Thus, the analysis is based on LADOT's adopted methodology under its Transportation Impact Study Guidelines, which requires use of LOS to evaluate traffic impacts of a Project.

[71] Los Angeles General Plan Safety Element, November 1996, Exhibit H, Critical Facilities and Lifeline Systems, p. 61.

XVIII. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☒	☐	☐	☐
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☒	☐	☐	☐

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k)?

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Potentially Significant Impact. Approved by Governor Jerry Brown on September 25, 2014, AB 52 establishes a formal consultation process for California Native American Tribes to identify potential significant impacts to Tribal Cultural Resources, as defined in Public Resources Code Section 21074, as part of CEQA. Effective July 1, 2015, AB 52 applies to projects that file a Notice of Preparation or Notice of Negative Declaration/Mitigated Negative Declaration on or after July 1, 2015. As specified in AB 52, lead agencies must provide notice to tribes that are traditionally and culturally affiliated with the

geographic area of a proposed project if the tribe has submitted a written request to be notified. The tribe must respond to the lead agency within 30 days of receipt of the notification if it wishes to engage in consultation on the project, and the lead agency must begin the consultation process within 30 days of receiving the request for consultation.

As noted above, the Project would require excavations up to approximately 30 feet below grade. Therefore, the potential exists for the Project to significantly impact a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American Tribe. In compliance with AB 52, the City will notify all applicable tribes, and the City will participate in any requested consultations for the Project. Further analysis of this topic will be provided in the EIR.

XIX. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☒	☐	☐	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☒	☐	☐	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Potentially Significant Impact. Water, wastewater, electric power, and natural gas systems consist of two components, the source of the supply or place of treatment (for wastewater), and the conveyance systems (i.e., distribution lines and mains) that link the location of these facilities to an individual development site. Given the Project's increase in the amount of developed floor area on the Project Site and the potential corresponding increase in water, electricity, and natural gas demand and wastewater generation, further analysis of this issue in an EIR will be provided.

With regard to storm water drainage, as discussed above in Checklist Question X, Hydrology and Water Quality, the Project would result in an increase in pervious surfaces and an associated decrease in stormwater flows. As such, the Project would not require or result in the relocation or construction of new or expanded storm water drainage.

b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Potentially Significant Impact. LADWP supplies water to the Project Site. Given the Project's increase in the amount of developed floor area on the Project Site, the Project has the potential to result in an increased demand for water provided by LADWP. Therefore, further analysis of this issue will be provided in the EIR.

c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Potentially Significant Impact. See Response to Checklist Question XVIII.a, above.

d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less Than Significant Impact. While the Bureau of Sanitation generally provides waste collection services to single-family and some small multi-family developments, private haulers permitted by the City provide waste collection services for most multi-family residential and commercial developments within the City. Solid waste transported by both public and private haulers is either recycled, reused, or transformed at a waste-to-energy facility, or disposed of at a landfill. Landfills within the County are categorized as either Class III or inert waste landfills. Non-hazardous municipal solid waste is disposed of in Class III landfills, while inert waste such as construction waste, yard trimmings, and earth-like waste are disposed of in inert waste landfills.[72] Ten Class III landfills and one inert waste landfill with solid waste facility permits are currently operating within the County.[73] In addition, there are

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Inert waste is waste which is neither chemically or biologically reactive and will not decompose. Examples of this are sand and concrete.

[73] County of Los Angeles, Department of Public Works, Los Angeles County Integrated Waste Management Plan 2017 Annual The 10 Class III landfills within the County include the Antelope Valley Landfill, the Burbank Landfill, the Calabasas Landfill, Chiquita Canyon Landfill, Lancaster Landfill, Pebbly Beach Landfill, San Clemente Landfill, Savage Canyon Landfill, the Scholl Canyon Landfill, and the Sunshine Canyon City and County Landfill. Azusa Land Reclamation is the only permitted Inert Waste Landfill in the County that has a full solid waste facility permit.

two solid waste transformation facilities within Los Angeles County that convert, combust, or otherwise process solid waste for the purpose of energy recovery.

Based on the most recent 2017 Countywide Integrated Waste Management Plan Annual Report, the four Class III landfills open to the City of Los Angeles[74] had a combined total remaining capacity of 149.77 million tons as of December 31, 2017. The permitted inert waste landfill serving the County is Azusa Land Reclamation. This facility currently has 55.71 million tons of remaining capacity and an average daily in-County disposal rate of 1,057 tons per day.[75] Los Angeles County continually evaluates landfill disposal needs and capacity through preparation of the Los Angeles County Countywide Integrated Waste Management Plan Annual Reports. Within each annual report, future landfill disposal needs over the next 15-year planning horizon are addressed in part by determining the available landfill capacity.[76]

Based on the 2017 Countywide Integrated Waste Management Plan Annual Report, the countywide cumulative need for Class III landfill disposal capacity through the year 2032 will not exceed the 2017 remaining permitted Class III landfill capacity of 149.77 million tons. The 2017 Countywide Integrated Waste Management Plan Annual Report evaluated six scenarios to increase capacity and determined that the County would be able to meet the disposal needs of all jurisdictions through the 15-year planning period with five of the six scenarios. The 2017 Countywide Integrated Waste Management Plan Annual Report scenario involving utilization of permitted in-county disposal capacity only would result in a shortfall. The 2017 Countywide Integrated Waste Management Plan Annual Report also concluded that in order to maintain adequate disposal capacity, individual jurisdictions must continue to pursue strategies to maximize waste reduction and recycling; expand existing landfills; study, promote, and develop alternative technologies; expand transfer and processing infrastructure; and use out of county disposal, including waste by rail. The City's Recovering Energy, Natural Resources and Economic Benefit from Waste for Los Angeles (RENEW LA) Plan sets a goal of becoming a "zero waste" city by 2030. To this end, the City of Los Angeles implements a number of source reduction and recycling programs such as curbside recycling, home composting demonstration programs, and construction and demolition debris recycling.[77] The City of Los Angeles is currently diverting 76 percent of its waste from landfills.[78] The City has adopted the goal of achieving 90 percent diversion by 2025, and zero waste by 2030.

The following analysis quantifies the Project's construction and operation solid waste generation.

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[74] Class III landfills open to the City of Los Angeles include Antelope Valley, Chiquita Canyon, Lancaster, and Sunshine Canyon landfills.

[75] County of Los Angeles, Department of Public Works; Los Angeles County Integrated Waste Management Plan 2017 Annual Report, April 2019.

[76] County of Los Angeles, Department of Public Works. Los Angeles County Integrated Waste Management Plan 2017 Annual Report, April 2019.

[77] City of Los Angeles, Solid Waste Integrated Resource Plan FAQ; www.zerowaste.lacity.org/files/info/fact_sheet/SWIRPFAQS.pdf, accessed December 13, 2018.

[78] LA Sanitation, Recycling, www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-r?_adf.ctrl-state=alxbkb91s_4&_afrLoop=18850686489149411#!, accessed December 13, 2018.

Construction

The Project Site is currently developed with several multi-family residential buildings and associated structures and parking. Specifically, the Project Site encompasses three multi-family residential developments totaling 112 units and 43,939 square feet.

Pursuant to the requirements of Senate Bill 1374, the Project would implement a construction waste management plan to recycle and/or salvage a minimum of 75 percent of non-hazardous demolition and construction debris. Materials that could be recycled or salvaged include asphalt, glass, and concrete. Debris not recycled could be accepted at the unclassified landfill (Azusa Land Reclamation) within Los Angeles County and within the Class III landfills open to the City. As shown in Table 2 below, after accounting for mandatory recycling, the Project would result in approximately 764 tons of construction and demolition waste. Given the remaining permitted capacity at the Azusa Land Reclamation facility, which is approximately 55.71 million tons, as well as the remaining 149.77 million tons of capacity at the Class III landfills open to the City, the landfills serving the Project Site would have sufficient capacity to accommodate the Project's construction solid waste disposal needs.

Table 2
Project Demolition and Construction Waste Generation

Building	Size	Generation Rate (lbs/sf)[a,b]	Total (tons)[b]
Construction Waste			
Residential (192 units)	241,754 sf	4.38	529
Demolition Waste			
Residential (112 units)	43,939 sf	115	2,526
Total for Construction and Demolition Waste			***3,056***
Total After 75-Percent Recycling			**764**

du = dwelling unit

lbs = pound

sf = square feet

[a] *U.S. Environmental Protection Agency, Report No. EPA530-98-010, Characterization of Building-Related Construction and Demolition Debris in the United States, June 1998, Table 3, Table 4 and Table 6. Generation rates used in this analysis are based on an average of individual rates assigned to specific building types.*

[b] *Used conversion of 1 ton = 2,000 pounds. Numbers have been rounded.*

Source: Eyestone Environmental, 2018.

As shown in Table 3 on page 91, upon full buildout, the Project would generate approximately 527 tons of solid waste per year. When accounting for the existing multi-family residential uses to be removed, the Project would result in a net increase in solid waste generation of 277 tons per year. The estimated solid waste is conservative because the waste generation factors used do not account for recycling or other waste diversion measures such as compliance with Assembly Bill 341, which requires California commercial enterprises and public entities that generate four cubic yards or more per week of

Table 3
Estimated Project Solid Waste Generation

Building	Size	Employee Generation Rate per sf[a]	Estimated No. of Employees	Solid Waste Generation Rate[b]	Total Generation (tons/year)
Existing					
Residential	112 du	N/A	N/A	2.23/du/year	250
Total Existing					**250**
Proposed					
Residential	192 du	N/A	N/A	2.23/du/year	428
Eldercare Facility Support Staff[c]	100 emp	N/A	100 emp	0.99/emp/year	99
Total with Implementation of Project					**527**
Total Net Increase					**277**

du = dwelling unit

emp = employees

sf = square feet

[a] *Employee Generation Rates from Los Angeles Unified School District Developer Fee Justification Study, March 2017, Table 14.*

[b] *Residential solid waste generation rates are from the City's L.A. City CEQA Thresholds Guide. Non-residential yearly solid waste generation factors are from City of Los Angeles Bureau of Sanitation, City Waste Characterization and Quantification Study, Table 4, July 2002.*

[c] *Used the "Services-Medical & Health" industry group from the City's Waste Characterization and Quantification Study. This includes support staff that would also be involved in the maintenance and use of the common areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area.*

Source: Eyestone Environmental, 2018.

waste, and multi-family housing with five or more units, to adopt recycling practices. Likewise, the analysis does not include implementation of the City's Zero Waste Plan, which is expected to result in a reduction of landfill disposal Citywide with a goal of reaching a Citywide recycling rate of 90 percent by the year 2025.[79]

The estimated annual net increase in solid waste that would be generated by the Project represents approximately 0.0002 percent of the remaining capacity (149.77 million tons) for the County's Class III landfills open to the City of Los Angeles.[80]

[79] LA Sanitation, Solid Waste Integrated Resources Plan, www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-zwswirp?_afrLoop=3608041245788654&_afrWindowMode=0&_afrWindowId=null&_adf.ctrl-state=8vrc5bges_179#!%40%40%3F_afrWindowId%3Dnull%26_afrLoop%3D3608041245788654%26_afrWindowMode%3D0%26_adf.ctrl-state%3D8vrc5bges_183, accessed December 13, 2018.

[80] (277 tons per year/149.77million tons) x 100 ≈ 0.0002%

Based on the above, the landfills that serve the Project Site would have sufficient permitted capacity to accommodate the solid waste that would be generated by the construction and operation of the Project. Therefore, impacts would be less than significant, and no mitigation measures are required. No further evaluation of this topic in the EIR is required.

e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant Impact. Solid waste management in the State is primarily guided by the California Integrated Waste Management Act of 1989 (AB 939), which emphasizes resource conservation through reduction, recycling, and reuse of solid waste. AB 939 establishes an integrated waste management hierarchy consisting of (in order of priority): (1) source reduction; (2) recycling and composting; and (3) environmentally safe transformation and land disposal. In addition, AB 1327 provided for the development of the California Solid Waste Reuse and Recycling Access Act of 1991, which requires the adoption of an ordinance by any local agency governing the provision of adequate areas for the collection and loading of recyclable materials in development projects. Furthermore, AB 341, which became effective on July 1, 2012, requires businesses and public entities that generate four cubic yards or more of waste per week and multi-family dwellings with five or more units, to recycle. The purpose of AB 341 is to reduce greenhouse gas emissions by diverting commercial solid waste from landfills and expand opportunities for recycling in California. In addition, in March 2006, the Los Angeles City Council adopted RENEW LA, a 20-year plan with the primary goal of shifting from waste disposal to resource recovery within the City, resulting in "zero waste" by 2030. The plan also calls for reductions in the quantity and environmental impacts of residue material disposed in landfills. In October 2014, Governor Jerry Brown signed AB 1826, requiring businesses to recycle their organic waste[81] on and after April 1, 2016, depending on the amount of waste generated per week. Specifically, beginning April 1, 2016, businesses that generate eight cubic yards of organic waste per week were required to arrange for organic waste recycling services. In addition, beginning January 1, 2017, businesses that generate four cubic yards of organic waste per week were required to arrange for organic waste recycling services.

The Project would be consistent with the applicable regulations associated with solid waste. Specifically, the Project would provide adequate storage areas in accordance with the City of Los Angeles Space Allocation Ordinance (Ordinance No. 171,687), which requires that development projects include an on-site recycling area or room of specified size.[82] The Project would also comply with AB 939, AB 341, AB 1826 and City waste diversion goals, as applicable, by providing clearly marked, source-sorted receptacles to facilitate recycling. Since the Project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste, impacts would be less than significant and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

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[81] Organic waste refers to food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

[82] Ordinance No. 171,687, adopted by the Los Angeles City Council on August 6, 1997.

XX. WILDFIRE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The Project Site is located in an urbanized area, and there are no wildlands located in the vicinity of the Project Site. The Project Site is not located within a City-designated Very High Fire Hazard Severity Zone,[83] nor is it located within a City-designated fire buffer zone.[84] Therefore, the Project

[83] City of Los Angeles Department of City Planning, Zone Information and Map Access System (ZIMAS), Parcel Profile Report for APNs 4315018034, 4315018033, 4315018032, 4315018031, 4315018030, and 4315018029, http://zimas.lacity.org/, accessed November 13, 2018. The Very High Fire Hazard Severity Zone was first established in the City of Los Angeles in 1999 and replaced the older "Mountain Fire District" and "Buffer Zone" shown on Exhibit D of the Los Angeles General Plan Safety Element.

Site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. No impacts regarding wildfire risks would occur, and no mitigation measures are required. No further evaluation of this topic in an EIR is required.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact. As discussed above, the Project is located in a highly urbanized area and does not serve as habitat for fish or wildlife species. No sensitive plant or animal community or special status species occur on the Project Site. However, as discussed above, the Project's potential environmental impacts for the following subject areas will be further analyzed in the EIR: aesthetics; air quality; energy; greenhouse gas emissions; land use and planning; noise; population and housing; public services (fire protection and police protection); transportation; tribal cultural resources; and utilities (water and wastewater).

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[84] City of Los Angeles, Safety Element of the Los Angeles City General Plan, November 26, 1996, Exhibit D, p. 53.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Potentially Significant Impact. The potential for cumulative impacts occurs when the impacts of the Project are combined with impacts from related development projects and result in impacts that are greater than the impacts of the Project alone. Located within the vicinity of the Project Site are other current and reasonably foreseeable projects, the development of which, in conjunction with that of the Project, may contribute to potential cumulative impacts. Impacts of the Project on both an individual and cumulative basis will be addressed in the EIR for the following subject areas: aesthetics; air quality; energy; greenhouse gas emissions; land use and planning; noise; population and housing; public services (fire protection and police protection); transportation; tribal cultural resources; and utilities (water, wastewater, and energy).

With regard to agriculture and forest resources, biological resources, and mineral resources, no such resources are located on the Project Site or in the surrounding area. In addition, the Project would have no impact on these resources, and therefore could not combine with other projects to result in cumulative impacts.

As discussed above, the Project would not result in any significant impacts to historic resources. Thus, the Project would not contribute to any cumulative impacts associated with historic resources. In addition, due to their site-specific nature, impacts related to archaeological and paleontological resources and human remains are typically assessed on a project-by-project basis. The Project vicinity is located within an urbanized area that has been disturbed over time. In the event that archaeological resources and human remains are uncovered, the Project and each related project would be required to comply with regulatory requirements governing the treatment of any uncovered archaeological resources or human remains. Furthermore, as part of the environmental review processes for the related projects, it is expected that mitigation measures would be established, as necessary, to address the potential for uncovering of paleontological resources. Therefore, Project impacts to archeological and paleontological resources and human remains would not be cumulatively considerable and would be less than significant.

Due to their site-specific nature, geology and soils impacts are typically assessed on a project-by-project basis or for a particular localized area. Therefore, as with the Project, related projects would address site-specific geologic hazards through the implementation of site-specific geotechnical recommendations and/or mitigation measures. Cumulative development would expose a greater number of people to seismic hazards. However, as with the Project, related projects would be subject to local, state, and federal regulations and standards for seismic safety. In addition, the Project Site is not located within an Alquist-Priolo Earthquake Fault Zone or underlain by an existing fault and would not exacerbate any existing seismic environmental conditions. Thus, Project impacts related to geology and soils would not be cumulatively considerable and would be less than significant.

Due to their site-specific nature, hazards and hazardous materials impacts are typically assessed on a project-by-project basis. Therefore, as with the Project, related projects would address site-specific hazards through the implementation of site-specific recommendations and/or mitigation measures. In addition, as with the Project, all related development located in the vicinity of the Project Site would be subject to local, regional, state, and federal regulations pertaining to hazards and hazardous materials.

Therefore, with adherence to applicable regulations, Project impacts with regard to hazards and hazardous materials would not be cumulatively considerable and would be less than significant.

Related projects could potentially result in an increase in surface water runoff and contribute point and non-point source pollutants to nearby water bodies. However, as with the Project, related projects would be subject to the City's LID requirements. In addition, construction projects greater than one acre would be subject to NPDES permit requirements, including development of a Stormwater Pollution Prevention Plan, Standard Urban Stormwater Mitigation Plan requirements during operation, and other local requirements pertaining to hydrology and surface water quality. It is anticipated that related projects would also be evaluated on an individual basis by City of Los Angeles Department of Public Works to determine appropriate BMPs and treatment measures to avoid significant impacts to hydrology and surface water quality. Thus, Project impacts related to hydrology and water quality would not be cumulatively considerable and would be less than significant.

With regard to public services such as schools, libraries, and parks, based on the type of residential uses proposed, the Project would not be anticipated to contribute to a cumulative demand for schools, libraries, and parks and recreation. Specifically, as the Project would not result in any increase in the number of school children in the LAUSD school system, the Project would not generate an increased demand for new or physically altered school facilities. Also, some related projects would be required to pay a school developer impact fee, which would offset any potential impact to schools associated with the related projects. As discussed above, the Project would not create a substantial demand on library services and facilities based on the type of residential uses proposed. Rather, the demand on library services may actually decrease as not all residents would be physically able to travel to the library. Furthermore, the Project and the related projects would not be expected to result in a substantial increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the nearby facilities would occur or be accelerated. The related projects would also be required to provide open space and recreational amenities or comply with the parks and open space requirements established by the LAMC, which would offset any potential impacts to parks and recreation facilities associated with development of related projects. Therefore, cumulative impacts with regard to schools would not occur as a result of the Project, and Project impacts to parks, recreation facilities, and libraries would not be cumulatively considerable and would be less than significant.

With regard to solid waste, given the urbanized and built-out nature of most of the City, it is anticipated that other projects would similarly represent a minor percentage of the remaining capacity of the County's Class III landfills open to the City. Additionally, the demand for landfill capacity is continually evaluated by the County through preparation of the Countywide Integrated Waste Management Plan annual reports. Each annual Countywide Integrated Waste Management Plan report assesses future landfill disposal needs over a 15 year planning horizon. Based on the 2016 Countywide Integrated Waste Management Plan Annual Report, the County anticipates that future disposal needs can be adequately met for the next 15 years (i.e., 2031). The preparation of each annual Countywide Integrated Waste Management Plan provides sufficient lead time (15 years) to address potential future shortfalls in landfill capacity. Furthermore, in future years, it is anticipated that the rate of declining landfill capacity would slow considering the City's goal to achieve zero waste by 2030. Therefore, cumulative impacts with respect to solid waste would be less than significant.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. Based on the analysis contained in this Initial Study, the Project could result in potentially significant impacts with regard to the following topics: aesthetics; air quality; energy; greenhouse gas emissions; land use and planning; noise; population and housing; public services (fire protection and police protection); transportation; tribal cultural resources; and utilities (water and wastewater). As a result, these potential effects will be analyzed further in the EIR.

Appendices

Appendix IS-1

Tree Survey

PRIMATERRA

LANDSCAPE ARCHITECTURE, DESIGN & ARBORICULTURE

Tree Clearance Letter

Date: November 19, 2018

˙o

Sabrina Schmidt-
Wetekam
c/o RCHS
3101 W. Exposition Place
Los Angeles, CA
90018

RE: Senior Residential Community at the Bellwood: Tree survey of the properties located at 10328-10384 & 10341-10381 Bellwood Avenue, Century City, California, 90064

Sabrina,

Based upon my site walk on November 2, 2018, of the properties listed above, I have concluded that there are **no protected tree species** on these properties or adjacent properties. A protected tree is defined in the City of Los Angeles Protected Tree Ordinance #177404 as consisting of the following:

1. All California native oaks
2. Western Sycamore *(Platanus racemosa)*
3. Southern California Black Walnut *(Juglans californica)*
4. California Bay *(Umbellularia californica)*

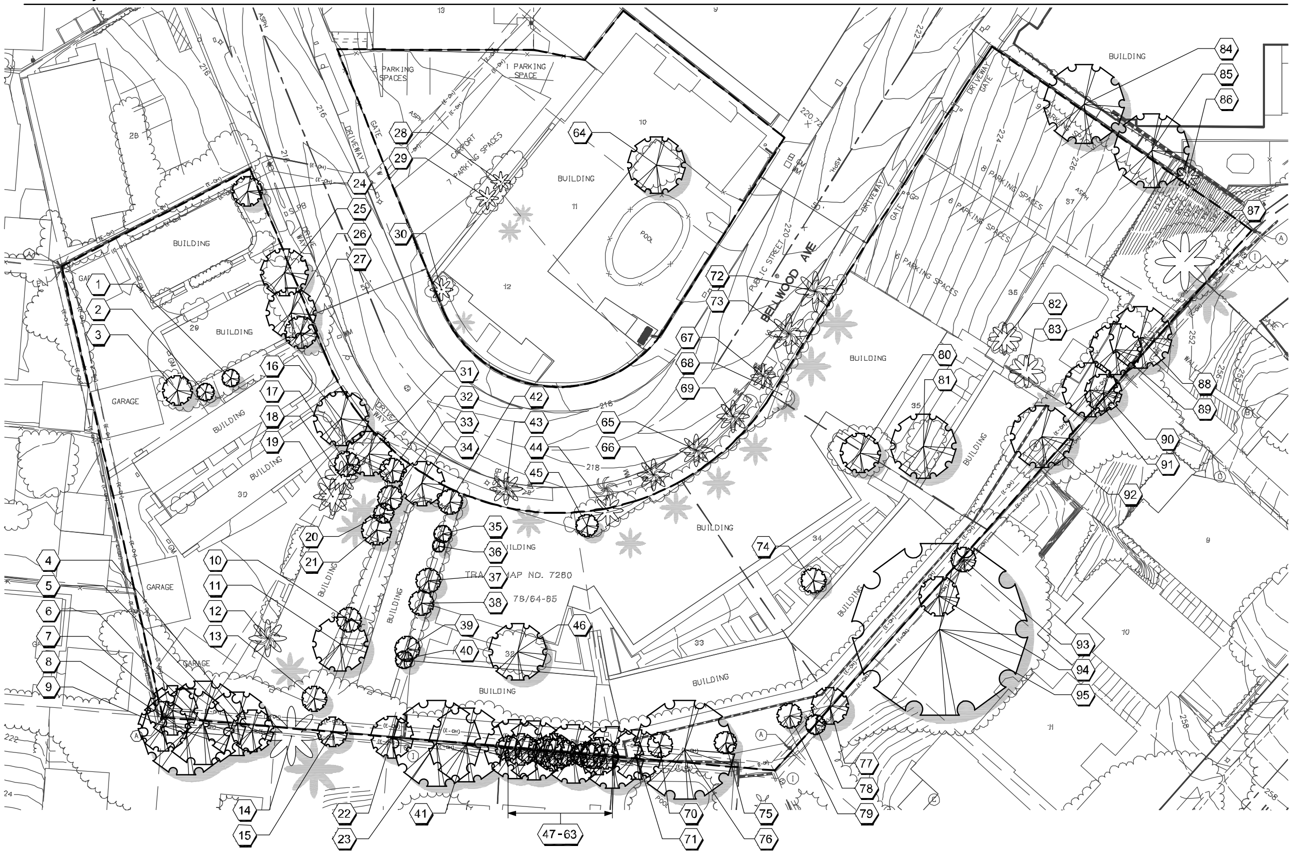
Please see attached Tree Survey at the end of this letter indicating the locations, species, sizes and other relevant information of all existing trees on the properties listed above. Should you have any questions, please feel free to contact me at 323-290-0450 or at edwards@primaterrastudio.com.

Further information regarding trees within the City of Los Angeles can be obtained by contacting The Urban Forestry Division at 213-847-3077.

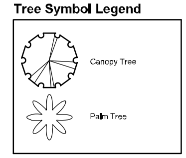
Respectfully Submitted,

Steven Edwards, RLA, ISA
Principal, Primaterra Studio
CA #5936
WE-9260A

Tree Survey



Tree Symbol Legend



Prepared by:
Steven Edwards
Registered Landscape Architect CA#5936
ISA Certified Arborist #WE-9760A
8850 Cadillac Avenue
Los Angeles, CA, 90034

Date of Inspection:
November 2, 2018

SCALE: 1" = 20'-0" (0 / 20 / 40)

NORTH

Tree Survey Legend

TREE #	BOTANICAL NAME	COMMON NAME	DBH (in)	HEIGHT (ft)	CANOPY DIAMETER (ft)	PROTECTED TREE*	8" OR GREATER DBH TREE**	TREE TO BE REMOVED	GENERAL CONDITION/ NOTES
1	*Pittosporum spp.*	Pittosporum	8"	15'	8'		X	X	
2	*Citrus spp.*	Citrus	7"	15'	7'			X	
3	*Eriobotrya japonica*	Loquat	9"	17'	12'		X	X	
4	*Syzygium paniculatum*	Australian Brush Cherry	23"	22'	17'		X		Multi-Trunks (x4)
5	*Ficus benjamina*	Weeping Fig	24"	23'	26'		X		Multi-Trunks (x3)
6	*Ficus benjamina*	Weeping Fig	32"	23'	34'		X		Multi-Trunks (x5)
7	*Syzygium paniculatum*	Australian Brush Cherry	30"	25'	20'		X	X	Multi-Trunks (x3)
8	*Ficus benjamina*	Weeping Fig	32"	30'	35'		X		Multi-Trunks (x3)
9	*Ficus benjamina*	Weeping Fig	13"	25'	20'		X		
10	*Syzygium paniculatum*	Australian Brush Cherry	10"	20'	10'		X	X	
11	*Syzygium paniculatum*	Australian Brush Cherry	10"	22'	12'		X	X	Multi-Trunks (x2)
12	*Washingtonia filibusta*	Hybrid Washingtonia	18"	18' BTH	15'		X	X	
13	*Syzygium paniculatum*	Australian Brush Cherry	6"	2'	10'			X	
14	*Phoenix canariensis*	Canary Island Palm	36"	20' BTH	23'		X		
15	*UNKNOWN*	UNKNOWN	9"	12'	12'		X		DEAD
16	*Yucca elephantipes*	Spineless Yucca	60"	17'	22'		X	X	Multi-Trunks (x3)
17	*Pittosporum spp.*	Pittosporum	7"	15'	10'			X	
18	*Washingtonia filibusta*	Hybrid Washingtonia	15"	12' BTH	13'		X	X	
19	*Washingtonia robusta*	Mexican Fan Palm	10"	6' BTH	8'		X	X	
20	*Yucca elephantipes*	Spineless Yucca	8"	17'	12'		X	X	
21	*Yucca elephantipes*	Spineless Yucca	18"	17'	12'		X	X	
22	*Syzygium paniculatum*	Australian Brush Cherry	16"	25'	17'		X		Multi-Trunks (x2). Trunk on property line: shared trunk, canopy, root system
23	*Eucalyptus spp.*	Gum	21"	30'	35'		X		Trunk on adjacent property; shared trunk (partial), canopy & root system
24	*Eriobotrya deflexa*	Bronze Loquat	6"	15'	12'			X	
25	*Eriobotrya deflexa*	Bronze Loquat	11"	11'	19'		X	X	
26	*Magnolia spp.*	Magnolia	13"	25'	20'		X	X	
27	*Yucca elephantipes*	Spineless Yucca	36"	15'	13'		X	X	Multi-Trunks (x3)
28	*Washingtonia robusta*	Mexican Fan Palm	12"	10' BTH	8'		X	X	
29	*Washingtonia robusta*	Mexican Fan Palm	17"	13' BTH	9'		X	X	
30	*Archontophoenix cunninghamiana*	King Palm	12"	35' BTH	9'		X	X	
31	*Yucca elephantipes*	Spineless Yucca	50"	16'	18'		X	X	Multi-Trunks (x4)
32	*Yucca elephantipes*	Spineless Yucca	18"	17'	10'		X	X	
33	*Yucca elephantipes*	Spineless Yucca	13"	16'	10'		X	X	
34	*Yucca elephantipes*	Spineless Yucca	65"	17'	18'		X	X	
35	*Dracaena spp.*	Corn Cane	11"	20'	7'		X	X	Multi-Trunks (x5)
36	*Dracaena marginata*	Dragon Tree	5"	14'	5'			X	
37	*Fatsia japonica*	Japanese Aralia	5"	12'	10'		X	X	
38	*Fatsia japonica*	Japanese Aralia	4"	12'	10'		X	X	
39	*Schefflera pueckleri*	Mallet Flower	7"	22'	10'			X	
40	*Fatsia japonica*	Japanese Aralia	7"	10'	7'			X	Multi-Trunks (x2)
41	*Eucaplyptus spp.*	Gum	20"	30'	30'		X		Trunk on property line; shared trunk, canopy & root system
42	*Syzygium paniculatum*	Australian Brush Cherry	9"	20'	10'		X	X	Multi-Trunks (x3)
43	*Syagrus romanzoffiana*	Queen Palm	12"	31' BTH	13'		X	X	Street Tree
44	*Syagrus romanzoffiana*	Queen Palm	11"	22' BTH	12'		X	X	Street Tree
45	*Liquidambar styraciflua*	American Sweet Gum	6"	18'	9'			X	
46	*Persea americana*	Avocado	8"	22'	23'		X	X	
47	*Ficus microcarpa*	Indian Laurel Fig	5"	9'	10'				Trunk on adjacent property; shared canopy & root system
48	*Ficus microcarpa*	Indian Laurel Fig	7"	25'	21'		X		Trunk on adjacent property; shared canopy & root system
49	*Ficus microcarpa*	Indian Laurel Fig	4"	15'	13'				Trunk on adjacent property; shared canopy & root system
50	*Ficus microcarpa*	Indian Laurel Fig	3"	18'	10'				Trunk on adjacent property; shared canopy & root system

TREE #	BOTANICAL NAME	COMMON NAME	DBH (in)	HEIGHT (ft)	CANOPY DIAMETER (ft)	PROTECTED TREE*	8" OR GREATER DBH TREE**	TREE TO BE REMOVED	GENERAL CONDITION/ NOTES
51	*Ficus microcarpa*	Indian Laurel Fig	4"	22'	24'				Trunk on adjacent property; shared canopy & root system
52	*Ficus microcarpa*	Indian Laurel Fig	5"	23'	10'				Trunk on adjacent property; shared canopy & root system
53	*Ficus microcarpa*	Indian Laurel Fig	6"	23'	12'				Trunk on adjacent property; shared canopy & root system
54	*Ficus microcarpa*	Indian Laurel Fig	6"	25'	15'				Trunk on adjacent property; shared canopy & root system
55	*Ficus microcarpa*	Indian Laurel Fig	6"	23'	12'				Trunk on adjacent property; shared canopy & root system
56	*Ficus microcarpa*	Indian Laurel Fig	8"	23'	10'		X		Trunk on adjacent property; shared canopy & root system
57	*Ficus microcarpa*	Indian Laurel Fig	9"	25'	21'		X		Trunk on adjacent property; shared canopy & root system
58	*Ficus microcarpa*	Indian Laurel Fig	5"	17'	8'				Trunk on adjacent property; shared canopy & root system
59	*Ficus microcarpa*	Indian Laurel Fig	8"	25'	10'		X		Trunk on adjacent property; shared canopy & root system
60	*Ficus microcarpa*	Indian Laurel Fig	9"	20'	10'		X		Trunk on adjacent property; shared canopy & root system
61	*Ficus microcarpa*	Indian Laurel Fig	10"	20'	15'		X		Trunk on adjacent property; shared canopy & root system
62	*Ficus microcarpa*	Indian Laurel Fig	6"	25'	10'				Trunk on adjacent property; shared canopy & root system
63	*Ficus microcarpa*	Indian Laurel Fig	20"	30'	25'		X		Multi-Trunks (x5). Trunk on adjacent property: shared canopy & root system
64	*Schefflera pueckleri*	Mallet Flower	23"	22'	23'		X	X	Very poor health
65	*Syagrus romanzoffiana*	Queen Palm	9"	26' BTH	13'		X	X	Street Tree
66	*Syagrus romanzoffiana*	Queen Palm	10"	26' BTH	13'		X	X	Street Tree
67	*Syagrus romanzoffiana*	Queen Palm	10"	32' BTH	10'		X	X	Street Tree
68	*Liquidambar styraciflua*	American Sweet Gum	6"	20'	9'			X	
69	*Syagrus romanzoffiana*	Queen Palm	9"	25' BTH	13'		X	X	Street Tree
70	*UNKNOWN*	UNKNOWN	7"	UNKNOWN	UNKNOWN			X	DEAD
71	*UNKNOWN*	UNKNOWN	27"	30'	20'		X	X	DEAD, Multi-Trunks (x5)
72	*Syagrus romanzoffiana*	Queen Palm	12"	32' BTH	16'		X	X	Street Tree
73	*Syagrus romanzoffiana*	Queen Palm	10"	29' BTH	16'		X	X	Street Tree
74	*Citrus spp.*	Grapefruit	4"	10'	10'			X	
75	*Pittosporum undulatum*	Victorian Box	9"	13'	9'		X	X	
76	*Pittosporum undulatum*	Victorian Box	13"	40'	40'		X	X	
77	*UNKNOWN*	UNKNOWN	13"	30'	15'		X	X	DEAD, Multi-Trunks (x2)
78	*UNKNOWN*	UNKNOWN	13"	20'	8'		X	X	DEAD, Multi-Trunks (x2)
79	*Pittosporum undulatum*	Victorian Box	8"	25'	10'		X	X	
80	*Pittosporum undulatum*	Victorian Box	13"	25'	16'		X	X	
81	*Callistemon viminalis*	Weeping Bottlebrush	29"	23'	26'		X	X	Multi-Trunks (x3)
82	*Archontophoenix cunninghamiana*	King Palm	17"	12' BTH	13'		X	X	Multi-Trunks (x3)
83	*Archontophoenix cunninghamiana*	King Palm	15"	12' BTH	13'		X	X	Multi-Trunks (x3)
84	*Ulmus parvifolia*	Chinese Elm	9"	20'	32'		X	X	
85	*Ficus microcarpa*	Indian Laurel Fig	20"	23'	30'		X		Multi-Trunks (x3)
86	*Washingtonia robusta*	Mexican Fan Palm	20"	16'	9'		X		
87	*Phoenix canariensis*	Canary Island Palm	32"	10' BTH	23'		X	X	
88	*Eucalyptus globulus*	Blue Gum	15"	25'	25'		X	X	
89	*Eucalyptus globulus*	Blue Gum	15"	23'	20'		X	X	
90	*Eucalyptus globulus*	Blue Gum	19"	20'	15'		X	X	
91	*Eucalyptus globulus*	Blue Gum	13"	25'	22'		X	X	
92	*Eucalyptus globulus*	Blue Gum	36"	30'	25'		X	X	Multi-Trunks (x6)
93	*Pyracantha coccinea*	Scarlet Firethorn	8"	12'	10'			X	Shrub naturalized as tree
94	*Pittosporum tobira*	Pittosporum	9"	20'	16'		X		
95	*Eucalyptus spp.*	Gum	UNKNOWN	40'	70'				Main trunk on adjacent property, Trunk DBH information N/A, Shared canopy & root system
96	*Melaleuca quinquinervia*	Cajeput Tree	13"	18'	8'			X	Multi-trunk

* *Tree that is identified as native and protected under LAMC Ordinance #177404*

** *Tree that has an 8" DBH or greater (including cumulative diameter for multi-trunks) as measured 54" above ground*

SENIOR RESIDENTIAL COMMUNITY AT THE BELLWOOD
10328-10384 & 10341-10381
Bellwood Avenue
Century City, California
90064

PRIMATERRA
LANDSCAPE ARCHITECTURE & DESIGN
8850 CADILLAC AVENUE
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Consultants

All designs, ideas, arrangements and plans indicated by these drawings and specifications are the property and copyright of the ARCHITECT and shall neither be used on any other work nor be used by any other person for any use whatsoever without written permission. Written dimensions shall take precedence over scaled dimensions and shall be verified at the job site. Any dimensional discrepancy shall be brought to the attention of the ARCHITECT prior to the commencement of work.

Issue	Date & Issue Description	By	Check
1	12/08/18 PLANNING SUBMITTAL	SE	KM

Seal/Signature

LICENSED LANDSCAPE ARCHITECT • STATE OF CALIFORNIA

Project Name
Senior Residential Community at the Bellwood
10328 - 10380 10341 Bellwood Avenue, Century City, California 90064

Project Number

CAD File Name

Description

TREE SURVEY

Scale
1" = 20'-0"

TS.01

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Appendix IS-2

Historical Resource Assessment Report

HISTORICAL RESOURCES ASSESSMENT REPORT

Bellwood Apartments

May 2019

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HISTORICAL RESOURCE ASSESSMENT REPORT

Bellwood Apartments

HISTORIC RESOURCES GROUP

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1. EXECUTIVE SUMMARY

Historic Resources Group has evaluated the following multi-family residential properties for potential historic significance: 10328-10366 Bellwood Avenue, referred to historically as the Bellwood Manor Apartments[1] (for purposes of this report, the "southern apartments"); the bungalow courts at 10368-10384 Bellwood Avenue (the "bungalow courts"); and 10341-10381 Bellwood Avenue, referred to historically as the Paul Cummins Patio Apartments[2] (the "northern apartments"). The three parcels are collectively referred to as "Bellwood Apartments" or the "Project Site." The Project Site is located in the West Los Angeles Community Plan Area ("CPA") of the City of Los Angeles, California. This historic assessment analyzes each property's eligibility for listing in the National Register of Historic Places, the California Register of Historical Resources, and as a City of Los Angeles Historic-Cultural Monument.

The southern apartments at 10328-10366 Bellwood Avenue are composed of four parcels with seven two-story multi-family residential buildings constructed between 1948 and 1950. The bungalow courts at 10368-10384 Bellwood Avenue comprise three single-story courts on two parcels constructed in 1940. The northern apartments at 10341-10381 Bellwood Avenue are a two-story apartment building designed by Carl L. Maston and constructed in 1951. None of the properties on the Project Site were identified by SurveyLA, Los Angeles' citywide historic resources survey, as potential historic resources. We have conducted a more detailed review of the subject properties, including visual observation of the existing conditions; a review of relevant primary and secondary source research; a review of the relevant historic contexts and themes as established by SurveyLA; and an analysis under the eligibility criteria and integrity thresholds for listing at the federal, state, and local levels. Based on this analysis, Historic Resources Group concurs with the survey finding and concludes that none of the multi-family properties that comprise the Project Site are eligible for historic designation at the federal, state, or local levels. Therefore, none of the buildings on the Project Site are considered historical resources as defined by the California Environmental Quality Act ("CEQA").

There is one historical resource located in the vicinity of the Project Site. The Olympic Boulevard Streetlights, identified as eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, and as City of Los Angeles Historic-Cultural Monuments by SurveyLA. The Olympic Boulevard Streetlights are therefore treated as a historical resource as defined by CEQA for purposes of this report, and the proposed Project is analyzed for potential impacts to the streetlights. The proposed Project will not result in a substantial adverse impact to the streetlights; they will remain intact and in place following

[1] The name "Bellwood Manor" comes from a display ad and an article in the *Los Angeles Times*; the building is also referenced under this name in the City Directory. "Display Ad 15 – No Title," *Los Angeles Times*, May 2, 1948 and "Recent Purchase," *Los Angeles Times*, February 1, 1953.
[2] The name "Paul Cummins Patio Apartments" comes from an article in the *Los Angeles Times* regarding the completion of the building. "Newly Completed," *Los Angeles Times*, December 14, 1952.

implementation of the Project, they will continue to convey their historic significance, and they will remain eligible for listing at the federal, state, and local levels.

Project Description

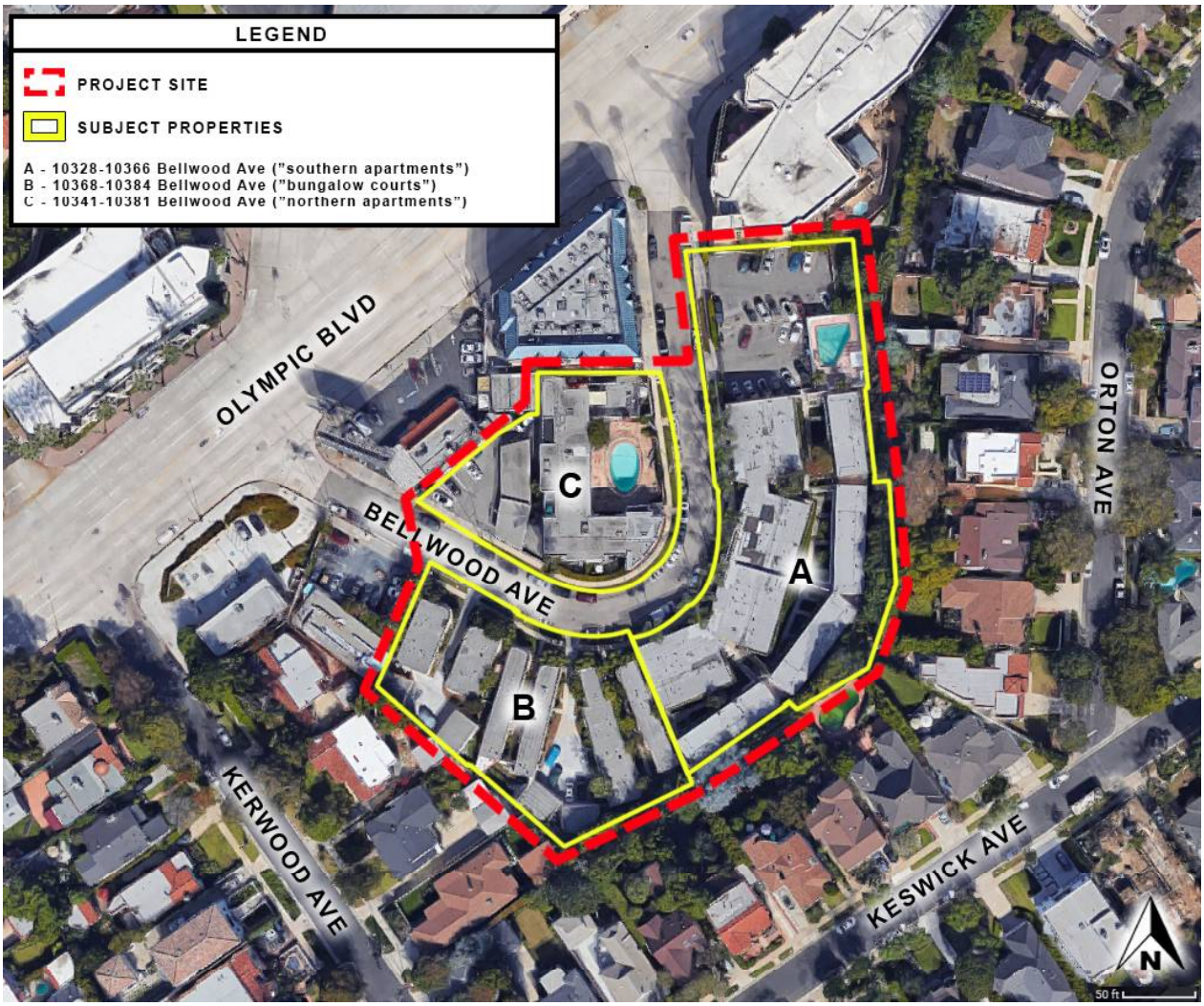
The Senior Residential Community at The Bellwood (the "Project") would provide for the development of a new eldercare facility for persons 62 years of age and older on a 2.22-acre (96,792 square feet) site located at 10328-10384 and 10341-10381 Bellwood Avenue (Project Site) in the West Los Angeles Community Plan area of the City of Los Angeles (the "City"). The Project would include 192 senior housing residential units and 50,463 square feet of common areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area. The proposed 192 senior housing residential units would be comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms. The Project would also provide 14,630 square feet of common open space, including several courtyards and terraces that would be distributed throughout the Project Site. The proposed uses would be located within a three- to six story building with a maximum height of 38 to 70 feet. A total of 140 vehicle parking spaces would be provided within two subterranean levels beneath the proposed building. The three existing multi-family residential developments with a total of 112 residential units and 43,939 square feet would be removed to accommodate the Project. Additionally, the Project includes the vacation of the portion of Bellwood Avenue that currently bifurcates the Project Site.

Project Location

The Project Site is located at 10328-10384 and 10341-10381 Bellwood Avenue within the West Los Angeles Community Plan area of the City. The Project Site is irregularly shaped and is bifurcated by Bellwood Avenue. Adjacent to the Project Site, Bellwood Avenue is a u-shaped street that connects to Olympic Boulevard at each end. The Project Site includes parcels located generally north/west and east/south of Bellwood Avenue as well as the portion of Bellwood Avenue that bifurcates the Project Site. The portion of the Project Site located generally north/west of Bellwood Avenue is bounded by the Century Park hotel to the north, Bellwood Avenue and multi-family residential uses to the east and south, and a small commercial shopping center to the west that includes a cleaners and a smog check station. The portion of the Project Site located east and south of Bellwood Avenue is generally bounded by a Courtyard by Marriott hotel and Bellwood Avenue to the north, single-family residential uses to the east and south, and a beauty salon to the west. Beyond the immediate surroundings of the Project Site are additional commercial and office uses along Olympic Boulevard, including a Ralph's grocery store located to the north and a Goodwill Donation Center to the west. Single- and multi-family residential uses continue east and south of the Project Site. Additionally, the Project Site is located 0.5 mile south of the Century City commercial district.

[See Figure 1. Project Location Map below.]

FIGURE 1. Project Location Map



The three multi-family properties that comprise the Project Site were each evaluated using eligibility criteria and integrity thresholds for listing in the National Register of Historic Places, the California Register of Historical Resources, and as City of Los Angeles Historic-Cultural Monuments. Research, field inspection, and analysis are based upon guidance from the National Park Service, the California Office of Historic Preservation, and the City of Los Angeles Office of Historic Resources for evaluating potential historic resources. A site visit was conducted on April 27, 2018.

This report was prepared using sources related to the history and development of each property. The following sources were consulted:

- Building permits
- Sanborn Fire Insurance maps
- Historic newspaper articles
- Other primary and secondary sources relevant to the history of the site
- SurveyLA Historic Context Statement, West Los Angeles Survey Report, and survey findings

Research, field inspection, and analysis were performed by Christine Lazzaretto, Managing Principal; and Molly Iker-Johnson, Associate Architectural Historian. Both meet the Secretary of the Interior's Professional Qualifications Standards in History and Architectural History.

Historic resources may be designated at the federal, state, and local levels. Properties located in the City of Los Angeles can be listed in the National Register of Historic Places, listed in the California Register of Historical Resources, and/or designated as a City of Los Angeles Historic-Cultural Monument. In order for a property to qualify for historic listing or designation, it must meet one or more identified criteria for evaluation. The property must also retain sufficient historic integrity to evoke the sense of place and time with which it is historically associated.

National Register of Historic Places

The National Register of Historic Places was authorized by the National Historic Preservation Act of 1966 to serve as an authoritative guide to the nation's historic places worthy of preservation.[3] The National Register Program is administered by the National Park Service, U.S. Department of the Interior.

To be eligible for listing and/or listed in the National Register, a resource must possess significance in American history and culture, architecture, or archaeology. Listing in the National Register is primarily honorary and does not in and of itself provide protection of a historic resource. The primary effect of listing in the National Register on private owners of historic buildings is the availability of financial and tax incentives. In addition, for projects that receive Federal funding, a clearance process must be completed in accordance with Section 106 of the National Historic Preservation Act. Furthermore, state and local regulations may apply to properties listed in the National Register.

The criteria for listing in the National Register follow established guidelines for determining the significance of properties. The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

[3] 36CFR60, Section 60.2.

D. That have yielded, or may be likely to yield, information important in prehistory or history.[4]

Historic Significance

As defined by the National Park Service, *historic significance* is "the importance of a property to the history, architecture, archaeology, engineering, or culture of a community, state, or the nation."[5] It is achieved in several ways:

- Association with important events, activities or patterns
- Association with important persons
- Distinctive physical characteristics of design, construction, or form
- Potential to yield important information

A property may be significant individually or as part of a grouping of properties.

Integrity

In addition to meeting any or all of the designation criteria, eligible properties must also possess historic *integrity*. Historic integrity is the ability of a property to convey its significance and is defined as "the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic period."[6]

The National Register recognizes seven aspects or qualities that comprise integrity: location, design, setting, materials, workmanship, feeling, and association. These qualities are defined as follows:

- *Location* is the place where the historic property was constructed or the place where the historic event took place.
- *Design* is the combination of elements that create the form, plan, space, structure, and style of a property.
- *Setting* is the physical environment of a historic property.
- *Materials* are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

[4] 36CFR60, Section 60.3. Criterion D addresses potential archaeological resources, which is outside the scope of this assessment.
[5] U.S. Department of the Interior, "National Register Bulletin 16A: How to Complete the National Register Registration Form (Washington D.C.: National Park Service, 1997), 3.
[6] "National Register Bulletin 16A," 4.

- *Workmanship* is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- *Feeling* is a property's expression of the aesthetic or historic sense of a particular period of time.
- *Association* is the direct link between an important historic event or person and a historic property.[7]

California Register of Historical Resources

The California Register of Historic Resources is an authoritative guide to the state's significant historic resources. For a property to be considered eligible for listing in the California Register, it must be found to be significant under at least one of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California or national history; or
3. It embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.[8]

For integrity purposes, a resource eligible for listing in the California Register must retain enough of its historic character or appearance to be recognizable as a historical resource and to convey the reason(s) for its significance. It is possible that a resource lacking sufficient integrity for listing in the National Register may still be eligible for the California Register.[9]

City of Los Angeles Historic-Cultural Monuments

The City of Los Angeles Cultural Heritage Ordinance, enacted in 1962 and amended in 2018, allows for the designation of buildings and sites as individual local landmarks in the City of Los Angeles, known as "Historic-Cultural Monuments" (HCMs).

Section 22.171.7 of Article 1, Chapter 9, Division 22 of the City of Los Angeles Administrative Code defines a Historic-Cultural Monument as "any site (including significant trees or other plant life located on the site), building or structure of particular historic or cultural significance to the City of Los Angeles." A proposed Monument may be designated by the City Council upon the

[7] U.S. Department of the Interior, "National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation" (Washington D.C.: National Park Service, 1995), 44-45.
[8] Criterion 4 addresses potential archaeological resources, which is outside the scope of this assessment.
[9] State of California Department of Parks and Recreation, "California Office of Historic Preservation Technical Assistance Series #6: California Register and National Register: A Comparison" (Sacramento, CA: Office of Historic Preservation, 2011).

recommendation of the Cultural Heritage Commission if it meets at least one of the following criteria:

1. Is identified with important events of national, state, or local history, or exemplifies significant contributions to the broad cultural, economic or social history of the nation, state, city or community;
2. Is associated with the lives of historic personages important to national, state, city, or local history; or
3. Embodies the distinctive characteristics of a style, type, period, or method of construction; or represents a notable work of a master designer, builder, or architect whose individual genius influenced his or her age.[10]

Designation as a Historic-Cultural Monument is "reserved for those resources that have a special aesthetic, architectural, or engineering interest or value of a historic nature."[11] For integrity purposes, a resource eligible for local designation should retain enough of its historic character or appearance to convey the reason(s) for its significance.

[10] Los Angeles Administrative Code (LAAC) Article 1, Chapter 9, Division 22; Added by Ordinance No. 178,402, effective 4-2-07; Amended by Ordinance 185,472, effective 4-28-18.
[11] "Historic-Cultural Monuments: What Makes a Resource Historically Significant?" Los Angeles Department of City Planning, Office of Historic Resources, https://preservation.lacity.org/commission/what-makes-resource-historically-significant (accessed August 2018).

The southern apartments (10328-10366 Bellwood Avenue), the bungalow courts (10368-10384 Bellwood Avenue), and the northern apartments (10341-10381 Bellwood Avenue) have not been identified in a previous survey and are not listed in the California Historical Resources Inventory (HRI).[12] SurveyLA, the Citywide historic resources survey overseen by the City of Los Angeles' Office of Historic Resources, did not identify any of these properties as potential historic resources when the West Los Angeles Community Plan Area was surveyed in 2011-2012.

[12] California Historical Resources Inventory, August 15, 2011. This is the most recent version of the HRI currently available from the California Office of Historic Preservation.

The Project Site is located near the Century City neighborhood of the West Los Angeles Community Plan Area in the City of Los Angeles.[13] The neighborhoods of the West Los Angeles CPA are diverse in uses and property types. The CPA includes the Los Angeles neighborhoods of Sawtelle, West Los Angeles, Cheviot Hills, Beverlywood, Rancho Park, and Century City. The CPA can generally be characterized by its mix of quiet residential neighborhoods and busy arterials lined with commercial uses. The area's prominence as a center of business activity is evident in the large areas of land occupied by Fox Studios and Century City. In particular, Century City's high-rise towers are visible throughout the Los Angeles basin.

After the secularization of the Spanish missions in 1833, West Los Angeles was occupied by portions of several Spanish and Mexican land grants that were divided, sold, and resold. With its expanses of fields and hills, West Los Angeles was poised for residential development in the early 20th century. A combination of factors contributed to the area's desirability among middle-class families, including the development of the University of California's Los Angeles campus (1929) in nearby Westwood, the charms of beach-accessible living in adjacent Santa Monica and Venice, and the local entertainment industry.

During the 1920s, large residential tracts were developed by several of Los Angeles' key community builders, including the Janss Investment Company, Frank Meline, Frans Nelson, and Ole Hansen, who recognized the opportunity in the relatively cheap land and the pressing demand for single-family homes.

The entertainment industry also played a role in the development of West Los Angeles. Fox Studios (now Twentieth Century Fox), one of Los Angeles' "Big Eight" major motion picture studios, established its West Los Angeles operations in 1928 on a large open tract that had been previously used as a "ranch" set location in silent-era films for Hollywood cowboy movie star Tom Mix. The presence of the studio contributed to the area's "Hollywood" cachet as well as its residential development by providing employment, which, in turn, furthered the need for local housing. Advertisements promoting the new Janss Investment Company subdivisions during the 1920s depicted maps indicating the location of Fox Studios as well as other nearby studios, touting West Los Angeles as "The Second Hollywood."

Beginning in the 1940s and continuing to the present, large swaths of multi-family apartments and condominiums of varying styles and sizes were constructed along major streets in West Los Angeles. In many cases, concentrations of multi-family residences extend into the earlier tract developments, creating a marked division between the older single-family residences and the considerably newer and larger multi-family buildings.

The 1950s and 1960s brought an increase in infrastructural, governmental, and business uses to West Los Angeles that continue to characterize the area today. The construction of the West

[13] West Los Angeles context adapted from Sapphos Environmental, Inc., *Historic Resources Survey Report: West Los Angeles Community Plan Area*, prepared for City of Los Angeles Department of City Planning, Office of Historic Resources, August 2012.

Los Angeles Civic Center reflects the expansion of the City of Los Angeles in the post-World War II era and the corresponding need for local governmental services. The West Los Angeles Branch City Hall was opened in 1961 in partial realization of the City Planning Commission's Master Plan, which called for decentralization of City services to outlying areas to serve the rapidly expanding population during this era.

A key development, conceived of as a "city within a city," the Century City complex built during the 1960s is one the city's several important commercial centers. With a master plan by noted architect Welton Becket, the complex included high-rise office towers, a retail center, residential towers, and the Century Plaza hotel, designed by renowned architect Minoru Yamasaki. Explored in a series of visionary plans, the full scope of the Century City development was unrealized. However, several key individual buildings designed by the era's most renowned architects, including I.M. Pei and Welton Becket, were built as originally envisioned. The spine of the development and an enduring component of Century City is the Avenue of the Stars, a broad and fast-moving road of landscaped medians, custom street lights, mature vegetation, and a prominent fountain that conveys the grandeur of the development.

Bellwood Avenue

Bellwood Avenue is a U-shaped street that connects to Olympic Boulevard on both ends. In 1929, an improvement project transformed Tenth Street, Country Club Drive, and Louisiana Avenue into a through highway from the east side of Los Angeles to Santa Monica.[14] The Tenth Street District Improvement Association proposed renaming Tenth Street "Olympic Boulevard" as soon as the entire street was improved.[15] The boulevard began at Indiana Avenue and ran west on Tenth Street and Country Club Drive and continuing along Louisiana Avenue.[16] The street was 100 feet wide, with the roadway 70 feet wide "between San Pedro and Hoover Streets, and seventy-four feet wide elsewhere."[17] By December 1930, Olympic Boulevard was partly open, and was fully complete by November 1931.[18] Further expansion of the Boulevard continued throughout the 1930s, with the section intersecting Fox Studios posing "the remaining principal barrier" to the road's completion.[19] In 1937, Fox dedicated a right-of-way for the boulevard through its studio.[20] When the construction of Olympic Boulevard was completed in this area, it bisected not only the studio property but also a tract of vacant parcels between Bellwood Avenue to the south and Lauriston Avenue to the north, creating a triangular island at Bellwood and Olympic, and an irregularly-shaped island at Lauriston and Olympic.[21]

[14] "Fox Studio Lot Divided by Highway," *Los Angeles Times*, November 16, 1929.
[15] "Tenth Street's Name Proposed," *Los Angeles Times*, July 20, 1929.
[16] "Fox Studio Lot Divided by Highway," *Los Angeles Times*, November 16, 1929.
[17] "Boulevard Improving Advanced," *Los Angeles Times*, July 8, 1930.
[18] "Olympic Boulevard Partly Open," *Los Angeles Times*, December 7, 1930; "Olympic Made Stop Artery," *Los Angeles Times*, November 1, 1931.
[19] "Road-to-Sea Links Added," *Los Angeles Times*, January 25, 1936.
[20] "New Impetus Given Formation of Olympic Boulevard," *Los Angeles Times*, January 17, 1937.
[21] 1938 and 1950 Sanborn Fire Insurance Maps.

Southern Apartments (10328-10366 Bellwood Avenue)

The southern apartments (10328-10366 Bellwood Avenue) are located on the east side of Bellwood Avenue, east of Olympic Boulevard near the Century City neighborhood of the City of Los Angeles. The four parcels comprising this property contain seven two-story multi-family residential buildings, constructed between 1948 and 1950, arranged in a linear fashion on the southern portion of the property.[22] There are low brick planters at the west (primary) façades of the three buildings fronting Bellwood Avenue, and mature landscaping and concrete paths between the three western (front) buildings and the four eastern (rear) buildings. The Mid-century Modern style buildings each have a roughly rectangular plan, complex massing, and asymmetrical composition. There are flat roofs with parapets and wide overhanging eaves at the primary (west) façade, clad in built-up roofing. There are stepped fascias at the eaves. Exterior walls are clad in smooth cement plaster with reeded accent panels. There are full-width covered balconies supported on grouped wood posts at the primary (west) façades, with gridded wood balustrades or parapets of horizontal lap siding. Fenestration consists of divided light wood sash double-hung and hopper windows. Apartment entrances consist of a single door with security door and small transom light above, accessed from the sidewalk by a brick stair and concrete path; second floor apartments are accessed from the sidewalk by a brick stair, concrete path, exterior stair, and balcony. There is a pool and a surface parking lot paved in asphaltic concrete at the north portion of the property, enclosed by a metal fence and gate.

Bungalow Courts (10368-10384 Bellwood Avenue)

The bungalow courts (10368-10384 Bellwood Avenue) are located on the south side of Bellwood Avenue, southeast of Olympic Boulevard near the Century City neighborhood of the City of Los Angeles. The two parcels comprising the property contain three single-story bungalow courts (six multi-family residential buildings) and four garages, constructed in 1940.[23] The bungalow courts are set back from Bellwood Avenue by small lawns and mature trees. Each of the Streamline Moderne buildings has a rectangular plan with one curved corner, simple massing, and asymmetrical composition. The buildings have flat built-up roofs with parapets, and shallow projecting canopies along the primary façades that wrap the rounded corners. Exterior walls are clad in smooth cement plaster, with plaster sill courses on the primary façades. Fenestration consists of divided light (two-over-two) wood sash double-hung windows. Each apartment entrance consists of a single paneled wood door, accessed from the sidewalk by a concrete path and step. There are secondary entrances to each apartment, consisting of a single, partially-glazed wood door. The four garages are arranged in pairs around two long, concrete

[22] Original building permits for the buildings at 10328-10366 Bellwood Avenue were not found; construction history based on a Certificate of Occupancy for City of Los Angeles building permit LA33557, June 23, 1948, and the 1950 Sanborn Fire Insurance map of the area.
[23] Building permits for the bungalow courts and three garages were found, dating to 1940; the fourth garage appears on the parcels in the 1950 Sanborn Fire Insurance map of the area.

driveways and are rectangular in plan with flat roofs clad in built-up roofing. Exterior walls are clad in smooth cement plaster.

The Northern Apartments (10341-10381 Bellwood Avenue)

The northern apartments (10341-10381 Bellwood Avenue) are located on the north side of Bellwood Avenue, southeast of Olympic Boulevard near the Century City neighborhood of the City of Los Angeles. The parcel contains a two-story apartment building, designed by Carl L. Maston in 1951. The Mid-century Modern building is roughly L-shaped in plan, with complex massing and asymmetrical composition. There is a flat roof with built-up roofing and projecting canopies over second-floor balconies. Exterior walls are clad in smooth cement plaster. Fenestration consists primarily of steel frame casement windows with divided light transom lights, metal frame horizontal-sliding windows arranged twos and threes, and fully-glazed metal frame sliding doors. Apartment entrances consist of a single wood door, accessed from the sidewalk by a concrete path and exterior stair. Secondary entrances consist of fully-glazed metal frame sliding doors, accessed by exterior stairs with metal pipe railings. There is a swimming pool surrounded by a paved courtyard at the northeast portion of the parcel, and a carport and a small surface parking lot paved in asphaltic concrete at the west side of the lot. The property is surrounded by a brick wall and metal fence and gates. Some units have balconies or patios.

Photographs of Evaluated Resources

The Southern Apartments (10328-10366 Bellwood Avenue)

Overall view of 10328-10366 Bellwood Avenue, facing southwest.

Overall view of 10328-10366 Bellwood Avenue, facing northeast.

Associated surface parking for 10328-10366 Bellwood Avenue, facing northeast.

Bungalow Courts (10368-10384 Bellwood Avenue)

Overall view of 10368-10384 Bellwood Avenue, facing southeast.

Overall view of 10368-10384 Bellwood Avenue, facing west.

Bungalow court at 10368-10370 Bellwood Avenue, facing south.

Bungalow court at 10372-10374 Bellwood Avenue, facing south.

Bungalow court at 10376-10378 Bellwood Avenue, facing south.

Bungalow court at 10382-10384 Bellwood Avenue, facing south.

The Northern Apartments (10341-10381 Bellwood Avenue)

Overall view of 10341-10381 Bellwood Avenue, facing west.

Overall view of 10341-10381 Bellwood Avenue and carport, facing northeast.

Construction History

The Southern Apartments (10328-10366 Bellwood Avenue)

The southern apartments (10328-10366 Bellwood Avenue) were constructed between 1948-1950; the original owner is listed as the Pacific Construction Finance Company.[24] It was designed in the Mid-century Modern architectural style and is composed of four parcels containing seven two-story multi-family residential buildings. In 1949, architect Charles DuBois was hired to remodel a portion of the front balcony and "add architectural beauty."[25] In 1953, a new retaining wall was added to the site. In 1960, a swimming pool court was added, followed by a swimming pool in 1961. Security doors have been added to apartment doors.

Summary of Building Permits

DATE	PERMIT NO.	OWNER	ARCHITECT	WORK
1948-06-08	LA17267	Pacific Construction Finance Co.	N/A	80′ x 115′ Parking lot
1948-06-23	LA33557	Russell L. Walton		Certificate of Occupancy: 2-story Type V apt house-hotel, 12 guest rooms, 6 apts
1949-12-20	LA29896	Bellwood Corp.	Chas (Charles) DuBois (architect)	Remodel portion of the front balcony; "add architectural beauty"
1961-02-02	LA52900	Jaffe Realty Co.	Geo J. Fosdyke	Retaining wall
1961-02-02	LA68486	Jaffe Realty Co.	Geo J. Fosdyke	Backfill behind retaining wall
1960-10-27	WLA31463	Simon Grawler	L. Nerenbaum	Swimming pool court
1960-10-27	WLA34314	Simon Grawler	Jerrold M. Caris	200′ retaining wall, 104′ fence, concrete slab, equipment cab
1961-02-02	LA80248	Bellwood Manor Apts.	James Fox (Engineer)	Semi-public swimming pool
1969-05-06	LA09547	Gravar	Peter Rollband (Contractor)	Plaster patching
1989-01-23	WLA79389	Dr. McClaney	Young's Roofing (Contractor)	Reroof existing bldg. – built up roof, nail base sheet 2 layer 10; ply 1 layer 72 capsheet
2005-04-06	05016-90000-06177	Moises Witemberg Trust Et Al		Replace damaged wood framing (less than 10%). Same size/spacing/type.

[24] Original building permits for the buildings at 10328-10366 Bellwood Avenue were not found; construction history based on a Certificate of Occupancy for City of Los Angeles building permit LA33557, June 23, 1948, and the 1950 Sanborn Fire Insurance map of the area.
[25] City of Los Angeles Building Permit No. LA29896, December 20, 1949.

Mid-century Modern Architecture

The southern apartments at 10328-10368 Bellwood Avenue were designed in the Mid-century Modern architectural style. Mid-century Modern is a term used to describe the post-World War II iteration of the International Style in both residential and commercial design. The International Style was characterized by geometric forms, smooth wall surfaces, and an absence of exterior decoration. Mid-century Modern represents the adaptation of these elements to the local climate and topography, as well as to the postwar need for efficiently-built, moderately-priced homes. In Southern California, this often meant the use of wood post-and-beam construction. Mid-century Modernism is often characterized by a clear expression of structure and materials, large expanses of glass, and open interior plans.

The roots of the style can be traced to early Modernists like Richard Neutra and Rudolph Schindler, whose local work inspired "second generation" Modern architects like Gregory Ain, Craig Ellwood, Harwell Hamilton Harris, Pierre Koenig, Raphael Soriano, and many more. These post-war architects developed an indigenous Modernism that was born from the International Style but matured into a fundamentally regional style, fostered in part by *Art and Architecture* magazine's pivotal Case Study Program (1945-1966). The style gained popularity because its use of standardized, prefabricated materials permitted quick and economical construction. It became the predominant architectural style in the postwar years and is represented in almost every property type, from single-family residences to commercial buildings to gas stations.

Architect Charles DuBois

Charles E. DuBois (1903-1996), AIA was born in Rochester, New York, and educated at UCLA and MIT. Prior to starting his own practice in 1938, he worked in the offices of Walker & Eisen (1923-1931), Gogerty & Weyl (1926-1929), and Horatio W. Bishop (1929). During World War II, DuBois worked as a Senior Screen Set Designer at Metro-Goldwyn-Mayer studios.[26] After the war he specialized in Ranch-style tract housing for developers. Notable works include Hollywood Riviera Estates (1955) in Palos Verdes, Riviera Beach Estates (1955) in Torrance, and Santa Anita Estates (1955) east of Pasadena. He frequently collaborated with developer J. George Wright and Don-Ja-Ran Construction Company, including such projects as Fairwood Estates (1964) in Granada Hills and the Kingswood Series of Woodland West (1961) in Woodland Hills. In the late 1950s and early 1960s, Dubois worked for developers George and Robert Alexander and Robert Fey in Palm Springs.

[26] AIA Application for Membership, Charles E. DuBois, August 27, 1946, 4.

Bungalow Courts (10368-10384 Bellwood Avenue)

The bungalow courts (10368-10384 Bellwood Avenue) were constructed in 1940 for owner Walter Blake. The contractor is listed as L. Sedlachek and the engineer was Gerald Marsac; there is no architect listed on the building permits. No biographical information is available for the contractor or engineer.

10368-10384 Bellwood Avenue represents the bungalow court property type. It was designed in the Streamline Moderne architectural style and is composed of two parcels which contain three single-story bungalow courts (six multi-family residential buildings) and four garages, constructed in 1940. A garage was added to the site between 1940 and 1950.[27] Based on visual observation, some windows have been replaced, and screen doors have been added to some entrances.

Summary of Building Permits

DATE	PERMIT NO.	OWNER	ARCHITECT	WORK
1940-06-07	LA22320	Walter Blake	L. Sedlacheck (contractor)/Gerald Marsac (Engineer)	1-story house for 3 families with 6 rooms (23′ x 47′) – House Court 1
1940-06-07	LA22314; LA22315	Walter Blake	L. Sedlacheck (contractor)/Gerald Marsac (Engineer)	1-story house for 3 families with 6 rooms (23′ x 47′) – House Court 2
1940-06-07	LA22316; LA 22317	Walter Blake	L. Sedlacheck (contractor)/Gerald Marsac (Engineer)	1-story house for 3 families with 6 rooms (14′ x 78′) – House Court 3
1940-06-07	LA22318; LA22323	Walter Blake	Gerald Marsac (Engineer)	1-story private garage (25 ½′ x 19′)
1940-06-07	LA22319	Walter Blake	Gerald Marsac (Engineer)	1-story private garage (17′ x 19′)
1940-07-15	LA27874	L. Sedlacheck	Jaeger Bros. Tile Co. (Contractor)	Interior tile work
1992-04-10	WV22889	Beverly Violin		Remove existing rfg; apply 24 sq class A fbrgls.

[27] Building permits for the bungalow courts and three garages were found, dating to 1940; the fourth garage appears on the parcels in the 1950 Sanborn Fire Insurance map of the area.

Bungalow Court Property Type[28]

10368-10384 Bellwood Avenue is an example of the bungalow court property type that was first established in Southern California in the early 20th century. The bungalow court was the earliest iteration of the low-rise, high-density courtyard building which would eventually become the predominant multi-family housing dwelling type in Southern California. Consisting of small, single-unit bungalows clustered on large lots, the bungalow court first began to appear around 1909 and flourished throughout the Los Angeles region – but particularly in rapidly growing areas such as Pasadena, Santa Monica, and Hollywood – until the end of the 1930s. The early courts were first designed as vacation residences for those "wintering" in the state, although as the population of Southern California grew exponentially in the 1920s and 1930s they became more associated with year-round rental housing for people with moderate or lower incomes. Composed of a series of individual dwelling units (bungalows) oriented around a central courtyard, the bungalow court promised much of the quiet and privacy of a single-family house with the flexibility and affordability of rental housing. A typical bungalow court might include between six and ten units, depending on the size of the property on which it was constructed. Smaller lots often featured linear plans of multiple units joined in a single row by common walls, while larger lots could accommodate a U-shaped plan around a shared central courtyard.

Historian Robert Winter attributes the concept of the bungalow court to East Coast influences, observing that the roots of the building type "go back to groupings of cottages built usually in religious campgrounds from Martha's Vineyard to Chautauqua to Winona Lake in Indiana and beyond." The bungalow court can also be seen as a direct offshoot of the California bungalow tradition – a regionally suitable, moderately priced, and carefully designed domestic architecture. The bungalow court was a unique compromise for high-density housing, bringing together the amenities of privacy and open space usually reserved for single-family living with the convenience of an apartment. With front porches and common areas encouraging socializing among the residents, bungalow courts also helped provide new residents with a sense of identity and place.

The first bungalow court is attributed to Pasadena architect Sylvanus Marston. His 1908 design for St. Francis Court in Pasadena was touted in contemporary advertisements as "a wonderfully artistic arrangement of eleven beautifully furnished bungalows around a large private court. Every appointment for comfort and welfare of tenants…Just the thing for winter tourists." Marston's concept of the residential courtyard is recognized as the first of its kind in the United States. St. Francis Court quickly became a popular seasonal residence for the upper middle-class wintering in Pasadena, particularly those "wanting to avoid the formality and activity at the leading resort hotels." Soon other architects and contractors were capitalizing on Marston's idea,

[28] Description of the bungalow court property type adapted from City of Los Angeles, Office of Historic Resources, *Los Angeles Citywide Historic Context Statement: Residential Development and Suburbanization, 1880-1980, Multi-Family Residential Development, 1895-1970*, December 2018.

and the building type would become "a favorite in Southern California for the first three decades of the 20th century."

Even as the bungalow court evolved to a lower-cost permanent housing model, characteristics found in Marston's initial design remained and came to define the dwelling type. Whether modest or extravagant, bungalow courts retained the same essential composition regardless of their style, level of architectural detail, or amenities. Indeed, as architect Ross Chapin acknowledges, the success of the form comes in part from the ease with which it could adapt to lot dimensions and the wide variety of styles that were possible.

According to Chapin, early courts, constructed through the mid-1910s, were mostly organized in a U-shaped plan on lots with a street frontage of 150 feet or more and equal depth. This allowed for a central garden space 50 feet wide, with room for porches, small private yards, and significant landscaping in the shared court. Early versions of the type were also composed of a single row of detached units arranged along a side court. These types of courts replicate the experience of a single-family house because though the individual bungalows are often very small, they are usually free-standing or include only one common wall with a neighboring unit. Each unit featured an individual entrance, typically with a small porch, while the common courtyard took the place of the individual front yard. Because bungalow courts tended to blend nicely into single-family streetscapes, they were "utilized extensively in spot development that did not disrupt the physical and social context of given neighborhoods."

After World War I, however, it was more common for the courts to be composed of larger residential buildings containing a series of attached units, reflecting the increasing density of Los Angeles. Units were still arranged in the characteristic pattern, with separate entrances (often with small porches) oriented directly onto a central court. Often, a larger, multi-unit building was situated at the rear of the courtyard, creating a U-shaped configuration and providing a visual terminus to the courtyard itself.

Land prices increased after World War I, which led to courts being constructed on even narrower lots, to about 75 feet wide, with the common space taking up the slack.[29] A half-court pattern appeared on a still smaller lot, in an L-shaped configuration. Pushing the limits further, some court layouts morphed into a series of one- or two-sided attached garden apartments.[30] Although these later buildings did not have the same character as the earlier one- or two-unit bungalow courts, they were a step in the transition in courtyard housing from true bungalow courts consisting of single or duplex units to U-shaped courtyards.

While examples of various styles and configurations were constructed throughout Southern California, bungalow courts became especially prevalent in Los Angeles, particularly in those parts of the city where the pressure for housing combined with an increasing urbanization and density. In these areas, single-family residences on their large lots were no longer the most

[29] Chapin, 46.
[30] Chapin, 46.

optimal use of the land. Thus, bungalow courts often appear as infill development in previously-established single-family neighborhoods. Beginning in the teens and continuing through the 1930s, bungalow courts appeared in nearly every Los Angeles neighborhood that was experiencing increasing residential density. As indicators of where these residential types were originally constructed, concentrations persist today in Hollywood, San Pedro, Silver Lake, Venice, Westlake, and Koreatown.

Streamline Moderne Architecture

The bungalow courts at 10368-10384 Bellwood Avenue reflect elements of the Streamline Moderne architectural style. The constraints of the Great Depression cut short the development of Art Deco architecture, but replaced it with a purer expression of modernity, the Streamline Moderne. Characterized by smooth surfaces, curved corners, and sweeping horizontal lines, Streamline Moderne is considered to be the first thoroughly Modern architectural style to achieve wide acceptance among the American public. Inspired by the industrial designs of the period, the style was popular throughout the United States in the late 1930s. Unlike the equally modern but highly-ornamental Art Deco style of the late 1920s, Streamline Moderne was perceived as expressing an austerity more appropriate for Depression-era architecture. The prime movers behind the Streamline Moderne style such as Raymond Loewy, Walter Dorwin Teague, Gilbert Rohde, and Norman Bel Geddes all disliked Art Deco, seeing it as falsely modern.

The origins of the Streamline Moderne are rooted in transportation design, which took the curved form of the teardrop, because it was the most efficient shape in lowering the wind resistance of an object. Product designers and architects who wanted to express efficiency borrowed the streamlined shape of cars, planes, trains, and ocean liners. Streamline Moderne architecture looked efficient in its clean lines. It was in fact relatively inexpensive to build because there was little labor-intensive ornament like terra cotta; exteriors tended to be concrete or plaster. The Streamline Moderne's finest hour was the New York World's Fair of 1939-40. Here, the "World of Tomorrow" showcased the cars and cities of the future, a robot, a microwave oven, and a television, all in streamlined pavilions. While the style was popular throughout Southern California during the 1930s, there are relatively few examples simply because there was so little construction activity during the Depression.

Art Deco and Streamline Moderne were not necessarily opposites. A Streamline Moderne building incorporating some Art Deco elements was not uncommon, particularly in the Federally-funded projects of the Works Progress Administration. The buildings executed under those programs are often referred to as PWA Moderne. They incorporate the clean lines of Streamline Moderne with simplified decorative elements of Art Deco to create an appropriately monumental but restrained architectural language for post offices, courthouses, schools, libraries, city halls, bridges, and other institutional and infrastructure projects across the country.

The Northern Apartments (10341-10381 Bellwood Avenue)

The northern apartments (10341-10381 Bellwood Avenue) were constructed in 1951 for owner Paul S. Cummins. The property is composed of one parcel which contains a two-story apartment building, designed in the Mid-century Modern architectural style by Carl L. Maston. In 1952, two apartment units, also designed by Maston, were added to the property, along with two fireplace chimneys, the pool, and the carport; and the front roofs were enlarged.[31] The balcony railing and privacy fencing around the pool have been replaced. Some windows have been replaced with aluminum horizontal-sliding windows.

Summary of Building Permits

DATE	PERMIT NO.	OWNER	ARCHITECT	WORK
1951-07-10	WLA2551	Paul S. Cummins	Carl Louis Maston	2-story apartment house for 11 families with 35 rooms (121′ x 63′)
1951-09-28	WLA2849	Paul S. Cummins	Carl Maston	Change proposed foundation to utilize caissons required to meet condition
1951-10-05	WLA2974	Paul S. Cummins	Carl Maston	Caisson & reinforce concrete beam foundations
1951-12-27	WLA3644	Paul S. Cummins		Addition of a fire place over door/stair in apts 9 and 10
1952-02-11	LA25298	Paul S. Cummins	Robert Kadow (Engineer)	Construct 18′ x 34′ pool
1952-02-11	WLA3964	Paul S. Cummins	Carl Maston	Add two apartment units per plans; add two fireplace chimneys
1952-04-14	WLA4657	Paul S. Cummins	Carl Maston	Enlarge front roofs
1952-09-18	WLA6221	Paul S. Cummins	Carl Maston	Construct 20′ x 63′ car port
1986-01-23	N/A	M. C. Cleney		Repair patio floor @ 2nd floor – Apt 8

[31] City of Los Angeles building permits LA25298, February 11, 1952; WLA3964, February 11, 1952; WLA4657. April 14, 1952; WLA 6221, September 18, 1952.

Mid-century Modern Architecture

The northern apartments were designed in the Mid-century Modern architectural style, which is discussed above.

Architect Carl Maston

Carl L. Maston (1915-1992), AIA, designed more than 100 buildings, including private residences, apartment buildings, shopping centers, and large-scale institutional projects. He studied at the University of Southern California, receiving his architecture degree in 1937. Upon graduation, Maston worked for the offices of Floyd Rible, A. Quincy Jones, Fred Emmons, Phil Daniel, and Allied Architects before opening his own office. His homes, shopping centers, military housing units, and university buildings can be found throughout Southern California. After serving in World War II, Maston returned to Los Angeles and opened his first office in Beverly Hills. In 1946, he was commissioned to build the Pandora Apartments, marking the beginning of his experimentation with garden-apartment design. In 1954, Maston completed his portion of the quintessential California apartment complex, the National Boulevard Apartments (Maston designed one building, architect Ray Kappe the other).[32] Among his most noted commissions are the School of Environmental Design at California Polytechnic State University, Pomona, and the Creative Arts Building at the California State University, San Bernardino. Carl Maston was 77 when he died in Hollywood in 1992.

[32] Andrew Wagner, "Maston Remastered," *Dwell Magazine*, September 2005.

Ownership/Occupant History

Research of building permit history, City Directories, and other applicable sources was conducted to identify potentially significant owners or residents of any of the properties on the Project Site.

The Southern Apartments (10328-10366 Bellwood Avenue)

The southern apartments were constructed for the Pacific Construction Finance Company. Subsequent owners include Russell L. Walton; the Bellwood Corporation; Jaffe Realty Company; and Simon Grawler. There is no evidence to suggest that any of the owners made significant contributions to history.

Several members of the entertainment industry were identified as residents of the southern apartments. In 1956, biographer, novelist, screenwriter, and film critic Gavin Lambert was a tentant.[33] Lambert[34] was educated at Oxford and took over Oxford Film Society's magazine *Sequence* in 1947 with Lindsay Anderson, Peter Ericsson, and Penelope Houston. In 1949, he transformed the British Film Institute journal, *Site and Sound*. By the time Lambert lived in the southern apartments, he had directed the film *Another Sky* (1954), which was admired by American director Nicholas Ray (*Rebel Without a Cause*). Lambert and Ray began a love affair, prompting Lambert's move to Hollywood to become Ray's assistant and a writer on *Bigger than Life* (1956) and *Bitter Victory* (1957). Lambert also collaborated on the script for *Sons and Lovers* (1960), which was nominated for an Academy Award, and on the script for *The Roman Spring of Mrs. Stone* (1961). During the same period, Lambert completed the first two books in his Hollywood Quartet: *The Slide Area* (1959) and *Inside Daisy Clover* (1963). The latter was made into a movie starring Natalie Wood. Lambert received a second Academy Award nomination in 1977 for his adaptation of Tony Page's *I Never Promised You a Rose Garden* (1977). By 1960, Lambert was living in Santa Monica.[35] He became an American citizen in 1964, but between 1974 and 1989 spent most of his time with his partner in North Africa. He continued to write fiction and Hollywood history and biographies until the end of his life. In Lambert's 2005 obituary, writer Armistead Maupin noted, "Decades before it was fashionable, Gavin Lambert expertly wove characters of every sexual stripe into his lustrous tapestries of southern California life. His elegant, stripped-down prose caught the last gasp of old Hollywood in a way that has yet to be rivalled."[36]

Among Lambert's neighbors in 1956 were Judith P. Spreckels and Dolph von Rudeen. Spreckels, a writer, actress, and friend of Elvis Presley, was briefly married to Spreckels Sugar heir Adolph B. Spreckels, Jr. in the early 1950s. Rudeen was a film and sound editor, who most notably

[33] *Los Angeles City Directory*, 1956.
[34] Biographical information adapted from "Gavin Lambert," *The Independent*, July 19, 2005.
[35] In 1960, he lived at 225 Ocean Avenue (per his passenger arrival card); in 1964 his address is listed as 319 Sumac Lane (per his naturalization card).
[36] "Movies: Gavin Lambert," The Guardian, July 22, 2005.

worked on the television series *Voyage to the Bottom of the* Sea (1966-1967) and the film *Time to Run* (1973).

Bungalow Courts (10368-10384 Bellwood Avenue)

The bungalow courts were originally constructed for Walter Blake. Subsequent owners include L. Sedlacheck (who was the contractor for the original construction of the property). There is no evidence to suggest that any of the owners made significant contributions to history. No significant residents were identified.

The Northern Apartments (10341-10381 Bellwood Avenue)

The northern apartments were constructed for Paul S. Cummins. Paul Stedman Cummins (1907-1983) was born in Cedar Rapids, Iowa, to Joseph E. Cummins and Ruby Stedman Cummins. He graduated from Northwestern University in 1932.[37] By 1952, he was president of the United Soya Co. and the Paul S. Cummins Building Co.[38] He was the owner-builder of the Paul Cummins Patio Apartments, and also owned the Paul Cummins Huddle Restaurant Group.[39] Cummins had a number of other real estate holdings in the Los Angeles area, including "one of Westwood's major office buildings" at the corner of Westwood Boulevard and Kinross Avenue,[40] the Biltmore Theater,[41] Gay 90's Restaurant,[42] and the Roaring 20's Restaurant.[43] Cummins died in 1983, at the age of 75. No evidence was found to suggest that Paul S. Cummins ever lived on the property.

Research did not uncover any additional notable owners of the northern apartments. By 1986, the property was owned by M.C. Cleney; no significant biographical information is available about Cleney. No potentially significant residents were identified.

[37] No indication of his degree or major was found.
[38] "Northwestern Alumni Honor Paul S. Cummins," *Los Angeles Times*, July 2, 1952.
[39] "Newly Completed," *Los Angeles Times*, December 14, 1952; "Financial News Briefs," *Los Angeles Times*, June 2, 1957; "Albert Sheetz Chain Acquired by Huddle Group," *Los Angeles Times,* June 14, 1957.
[40] "Glendale Federal Buys Building," *Los Angeles Times*, January 12, 1958.
[41] "Biltmore Theater Sold and May Be Demolished," *Los Angeles Times*, May 28, 1958.
[42] Joan Winchell, "Little Known Facts," *Los Angeles Times*, May 8, 1959.
[43] Christy Fox, "No Pique-Nique? You've Missed Fun," *Los Angeles Times*, September 28, 1959.

SurveyLA is the City of Los Angeles' citywide survey of historic resources, conducted in accordance with the standards and guidelines set forth by the National Park Service and the California State Office of Historic Preservation. Properties surveyed as part of SurveyLA were evaluated for eligibility for listing in the National Register of Historic Places, the California Register of Historical Resources, and a Los Angeles Historic-Cultural Monuments.

Utilizing the Historic Context Statement developed by SurveyLA, the multi-family residences on the Project Site are evaluated under the contexts and themes as outlined below.

The Southern Apartments (10328-10366 Bellwood Avenue)

Context: *Entertainment Industry, 1908-1980*
Theme: *Residential Properties Associated with the Entertainment Industry, 1908-1980*
Sub-Theme: *Residential Properties Associated with Significant People in the Entertainment Industry, 1908-1980*[44]

Criteria: NR: B CR: 2 Local: 2

General Guidance on Evaluations: There are many hundreds of residential properties in Los Angeles associated with persons in the entertainment industry and, in some cases, there are multiple residences associated with a single individual. Not all of these resources are significant under this theme. As indicated in the eligibility standards below, the property must be directly associated with the productive life of the person within the entertainment industry AND the individual must be proven to have made an important contribution to the entertainment industry. Eligibility standards developed for this theme are largely based on the National Register Bulletin "Guidelines for Evaluating and Documenting Properties Associated with Significant Persons" (https://www.nps.gov/nr/publications/bulletins/pdfs/nrb32.pdf) which may provide additional information to apply in making property evaluations under this theme, particularly as it related to comparative analysis.

Summary Statement of Significance: Los Angeles' identity is inextricably tied to its role in the entertainment industry. The well-known advertising slogan "The Entertainment Capital of the World" reflects the city's central place in the motion picture, radio, television, and recording/music industries. Residential properties evaluated under this theme are significant in the areas of Entertainment and/or Ethnic History and are directly associated with individuals who made significant contributions to the entertainment industry. This may include actors, directors, writers, producers, musicians, technicians, recording artists, and others. Residential properties were often designed and built for a significant person and/or were the long-term home of a significant person.

[44] City of Los Angeles, Office of Historic Resources, *Los Angeles Citywide Historic Context Statement, Entertainment Industry, 1908-1980,* October 2017, 27-29.

Eligibility Standards:

- A residence, estate, or multi-family property designed specifically for a significant person in the entertainment industry and/or
- The long-term residence, estate, or multi-family property of a significant person in the entertainment industry
- Is directly associated with the productive life of the person within the entertainment industry (film, radio, television, and recording industries)
- Individual must be proven to have made an important contribution to the entertainment industry

Character Defining/Associative Features:

- Retains most of the essential character defining features from the period of significance when the property was associated with the significant person
- The individual must have resided in the property during the period in which he or she achieved significance
- For multi-family properties, the apartment or room occupied by the person must be readable from the period of significance
- If the property is the only remaining resource associated with a person significant in the entertainment industry, it may be eligible even if all or most of the person's significant work occurred before living in the property

Integrity Considerations:

- Should retain integrity of Location, Design, Feeling, and Association from the period of significance
- Integrity is based on the period during which the significant person occupied the residence
- Properties may be difficult to observe from the public right-of-way due to privacy walls and landscaping
- Adjacent setting may have changed
- Some original materials may be altered or removed

The Southern Apartments (10328-10366 Bellwood Avenue) & Northern Apartments (10341-10381 Bellwood Avenue)

Context: *Architecture and Engineering, 1850-1980*
Sub-Context: *L.A. Modernism, 1919-1980*
Theme: *Post-War Modernism, 1946-1976*
Sub-Theme: *Mid-century Modernism, 1945-1970*[45]

Criteria: NR: C CR: 3 Local: 3

Eligibility Standards:

- Exhibits quality of design through distinctive features
- Retains the essential character defining features of Mid-century Modernism from the period of significance
- Was constructed during the period of significance

Character Defining/Associative Features:

- Direct expression of the structural system, often wood or steel post and beam
- Flat roof, at times with wide overhanging eaves
- Floor-to-ceiling windows, often flush-mounted metal framed
- Horizontal massing
- Simple, geometric volumes
- Unornamented wall surfaces

Integrity Considerations:

- Original garage doors may have been replaced
- Original setting (surrounding buildings, landscape) may not be intact
- Original use may have changed
- Replacement of some windows and doors may be acceptable if the openings have not been resized and original fenestration patterns have not been disrupted
- The addition of decorative elements to originally sparse facades
- The addition of security features such as screen doors and bars at windows
- The painting of surfaces (wood) that might have been originally unpainted

Bungalow Courts (10368-10384 Bellwood Avenue)

Context: *Residential Development and Suburbanization, 1880-1980*
Theme: *Multi-family Residential Development, 1895-1970*
Sub-Theme: *The Bungalow Court, 1910-1939*[46]

[45] City of Los Angeles, Office of Historic Resources, *Architecture and Engineering, 1850-1980 Eligibility Standards,* 472-473.
[46] City of Los Angeles, Office of Historic Resources, *Los Angeles Citywide Historic Context Statement: Residential Development and Suburbanization, 1880-1980, Multi-Family Residential Development, 1895-1970,* December 2018, 49-50.

Summary Statement of Significance: Bungalow courts evaluated under this theme are significant in the area of Community Planning and Development. They represent an important multi-family building type that proliferated throughout the city during most of the twentieth century and reflects trends in urban planning to accommodate full and part time residents as well as tourists and other visitors. The bungalow court provided the privacy, open space, and other features associated with a single-family house, with the convenience and affordability of apartment living. Many examples are also significant in the area of Architecture as excellent examples of their respective architectural styles. Bungalow courts are becoming increasingly rare and are a highly threatened property type.

Period of Significance: 1910-1939
Criteria: NR: A/C CR: 1/3 Local: 1/3

Eligibility Standards:

- A good to excellent example of the type
- Was constructed during the period of significance
- Represents an intact court plan from the period of construction

Character Defining/Associative Features:

- Retains most of the essential character-defining features from the period of significance
- One story, occasionally with a two-story structure at the rear
- Composed of multiple detached or semi-detached buildings
- Typically occupies a single or double residential lot
- Units are oriented around a central common open area, a primary feature of the design (typically a landscaped area with a central walkway or simple cement sidewalk; a paved central motor court is less common)
- The primary entrance to individual units open directly onto the shared central walkway; front units may open onto the street
- Early examples have little or no accommodation for the automobile
- Examples that accommodate automobiles may include a central motor court or side alleys leading to a parking area or garages
- Examples built on steep topography may have parking garages at the street level
- May also be significant as a good to excellent example of an architectural style from its period and/or the work of a significant architect or builder
- Property as a whole is composed of a unifying architectural style
- Bungalow courts are of particular significance in Hollywood, where large colonies once existed to accommodate people working in the burgeoning entertainment industry

Integrity Considerations:

- Should retain integrity of Location, Design, Materials, and Setting (must retain the relationship between the units and the courtyard), and Feeling

- Some original materials may be altered or replaced
- Replacement of some windows may be acceptable if the openings have not been changed or resized
- Security bars may have been added
- Original landscaping may have been altered or removed
- Surrounding buildings and land uses may have changed
- If it is a rare surviving example of its type, or is a rare example in the community in which it is located, a greater degree of alteration or fewer character-defining features may be acceptable

Context: *Architecture and Engineering, 1850-1980*
Sub-Context: *L.A. Modernism, 1919-1980*
Theme: *Related Responses to Modernism, 1926-1970*
Sub-Theme: *Streamline Moderne, 1934-1945*[47]

Criteria: NR: C CR: 3 Local: 3

Eligibility Standards:

- Retains the essential character defining features of the Streamline Moderne style from the period of significance
- Was constructed during the period of significance
- Exhibits quality of design through distinctive features

Character Defining/Associative Features:

- Horizontal orientation
- Rounded corners and curved surfaces, emulating a "windswept" appearance
- Flat or nearly flat roofs
- Speedlines at wall surfaces, such as horizontal moldings and continuous sill courses
- Smooth stucco cladding
- Metal, often steel casement, windows
- Unadorned wall surfaces, with minimal ornament
- Windows "punched" into walls, with no surrounds

Integrity Considerations:

- Setting may have changed (surrounding buildings and land uses)
- Location, may have been moved for preservation purposes
- Original use may have changed

[47] City of Los Angeles, Office of Historic Resources, *Architecture and Engineering, 1850-1980 Eligibility Standards,* 451-452. The narrative for the L.A. Modernism context has not yet been published; therefore, there is no summary statement of significance included.

- Replacement of some windows and doors may be acceptable if the openings have not been resized and original fenestration patterns have not been disrupted
- The addition of security features such as screen doors and bars at windows
- Original garage doors may have been replaced

The multi-family residences that comprise the Project Site have been evaluated individually for potential historic significance using the eligibility criteria and integrity thresholds for listing in the National Register of Historic Places, the California Register of Historical Resources, and as Los Angeles Historic-Cultural Monuments.

The Southern Apartments (10328-10366 Bellwood Avenue)

Criterion A/1/1

According to guidance from the National Park Service, to be considered for listing for its association with an event or trend, a property "must have an important association with the event or historic trends, and it must retain historic integrity […It] must be documented, through accepted means of historical or archeological research (including oral history), to have existed at the time of the event or pattern of events and to have been associated with those events[…] Mere association with historic events or trends is not enough, in and of itself, to qualify under [this criterion]: the property's specific association must be considered important as well. For example, a building historically in commercial use must be shown to have been significant in commercial history."[48]

The southern apartments (10328-10366 Bellwood Avenue) were constructed between 1948 and 1950 to fill a need for housing in the period following World War II and do not conform to any planned development of the area. As noted above, in the postwar period, large swaths of multi-family apartments and condominiums of varying styles and sizes were constructed in West Los Angeles. In many cases, concentrations of multi-family residences acted as infill in earlier tract developments. The southern apartments were constructed as infill on the edge of an earlier single-family residential tract. The construction of this multi-family residence does not represent a cohesive or organized development effort associated with a particular period, and no evidence was found to suggest that any important events took place in this location. Therefore, is the southern apartments (10328-10366 Bellwood Avenue) are not eligible under Criterion A/1/1.

Criterion B/2/2

According to the eligibility standards developed by SurveyLA for evaluating properties that may be significant for an association with an important person in the entertainment industry, the property must be directly associated with the productive life of the person within the entertainment industry and the individual must be proven to have made an important contribution to the entertainment industry.

In 1956, biographer, novelist, screenwriter, and film critic Gavin Lambert was one of the building's tenants.[49] However, Lambert only lived in the southern apartments for a brief time,

[48] *National Register Bulletin 15.*
[49] *Los Angeles City Directory,* 1956.

and it was not the period during which he achieved significance in the field. His productive period spanned from 1959, when the first book in his Hollywood Quartet, *The Slide Area*, was published, and continued through 1977, when he received an Academy Award nomination for his adaptation of Tony Page's *I Never Promised You a Rose Garden*. Lambert's significance in his field does not coincide with his residence at the southern apartments. According to available information about Lambert's life, he lived in several locations in Southern California during his productive period. Therefore, the property does not meet the eligibility standards as outlined in SurveyLA for a property that is significant for an association with an important person in the entertainment industry. It is not the only remaining property associated with Lambert's life; it was not designed or built for a significant person in the entertainment industry; it was not the long-term home of a significant person in the entertainment industry; and it is not directly associated with a significant person's productive life.

Among Lambert's neighbors in 1956 were Judith P. Spreckels and Dolph von Rudeen. However, no documentation was found to suggest that Spreckels, Rudeen, or any other owner or tenant of the southern apartments made an important contribution to the entertainment industry or were otherwise significant in local, state, or national history.

Therefore, the southern apartments (10328-10366 Bellwood Avenue) are not eligible under Criterion B/2/2.

Criterion C/3/3

According to guidance from the National Park Service, properties that are eligible for their architectural merit should embody the distinctive characteristics of a style or type and/or possess high artistic value. A property that is an example of a recognizable style or property type does not automatically qualify it for designation; typically, the property should be an excellent or rare example of its style or type that distinguishes it from other examples from the period. Further, per the eligibility standards developed by SurveyLA for evaluating Mid-century Modern residential architecture in Los Angeles, an eligibility property must exhibit "quality of design through distinctive features."

Additionally, per the National Park Service, "a master is a figure of generally recognized greatness in a field […] The property must express a particular phase in the development of the master's career, an aspect of his or her work, or a particular idea or theme in his or her craft. A property is not eligible as the work of a master, however, simply because it was designed by a prominent architect. For example, not every building designed by Frank Lloyd Wright is eligible under this portion of Criterion C, although it might meet other portions of the Criterion, for instance as a representative of the Prairie style."[50]

The southern apartments were designed in the Mid-century Modern architectural style and exhibit general character-defining features of the style as identified by SurveyLA, including a flat

[50] *National Register Bulletin 15.*

roof with wide, overhanging eaves, horizontal massing, simple, geometric volumes, and unornamented wall surfaces. However, the buildings are an unremarkable example of the style, particularly when compared with other Mid-century Modern multi-family residential buildings in the area and throughout Los Angeles. The southern apartments are not an excellent example of the style, they do not exhibit quality of design through distinctive details, and they do not have a characteristic style or quality that is distinguishable from other standard Mid-century Modern multi-family residential buildings constructed in large numbers during the same period.

The architect of the original 1948 design is unknown; no original buildings permits are on file and the certificate of occupancy does not list an architect. In 1949, the buildings were altered by local architect Charles DuBois, who was hired to alter the front balcony and "add architectural beauty." DuBois was prolific in the post-World War II era, but there is no evidence to indicate that DuBois was a figure of generally recognized greatness in his field, and the alterations at the southern apartments do not represent a characteristic style and quality specific to DuBois' work.

The southern apartments do not embody the distinctive characteristics of a style or type; they do not represent the work of a master; they do not possess high artistic values; and they do not meet the eligibility standards for evaluating Mid-century Modern residential buildings as outlined by SurveyLA. Therefore, the southern apartments (10328-10366 Bellwood Avenue) are not eligible under Criterion C/3/3.

Bungalow Courts (10368-10384 Bellwood Avenue)

Criterion A/1/1

The buildings comprising the bungalow courts at 10368-10384 Bellwood Avenue were constructed in 1940. They were constructed as infill development and do not conform to any planned development of the area. They do not represent a cohesive or organized development effort associated with a particular period, and no evidence was found to suggest that any important events took place in this location. Therefore, they are not eligible under Criterion A/1/1.

The property is a late example of the bungalow court property type; it is evaluated as an example of the type under Criterion C/3/3, below.

Criterion B/2/2

According to guidance from the National Park Service, properties may be eligible for an association with the lives of persons significant in our past: individuals whose activities are demonstrably important within a local, state, or national historic context. A property is not eligible if its only justification for significance is that it was owned or used by a person who is a member of an identifiable profession, class, or social or ethnic group. In addition, the property

must be associated with a person's productive life, reflecting the time period when he or she achieved significance.[51]

No documentation was found to suggest that any former owner or tenant of the bungalow courts at 10368-10384 Bellwood Avenue was significant in local, state, or national history. Therefore, it is not eligible under Criterion B/2/2.

Criterion C/3/3

The bungalow courts at 10368-10384 Bellwood Avenue were constructed in 1940, and they exhibit characteristics of the Streamline Moderne architectural style, including a horizontal orientation, rounded corners, flat roofs, speedlines (represented in the canopies), smooth stucco cladding, unadorned wall surfaces, and windows "punched" into the walls, with no surrounds. However, the bungalow courts are an unremarkable example of the style. They do not represent an excellent example of the style, they do not possess high artistic value, and they do not exhibit quality of design through distinctive details.

10368-10384 Bellwood Avenue is an example of the bungalow court property type, first established in Southern California in the first decade of the 20th century. However, the property is a late example of the type, constructed outside the period of significance for bungalow courts in Los Angeles, it is not an excellent example of the type, and it does not reflect the significant character-defining features of the bungalow court. The buildings that comprise the court were designed and sited to fit the shape of the parcels, and do not conform to a particular bungalow court plan. As identified by the SurveyLA Historic Context Statement, bungalow courts have particular significance in certain areas of the city; they were not an important type in West Los Angeles, which saw significant multi-family residential development in the period after World War II.

No architect is associated with the bungalow courts' design; the building permits name only the structural engineer, Gerald Marsac. There is no evidence to indicate that Marsac was a figure of generally recognized greatness in his field, or a known craftsman of consummate skill; and his work, as exemplified at 10368-10384 Bellwood Avenue, has no characteristic style and quality to distinguish it from other standard bungalow courts constructed in large numbers in Southern California between 1910 and 1939.[52]

The bungalow court apartments at 10368-10384 Bellwood Avenue do not embody the distinctive characteristics of a style or type; do not represent the work of a master; do not possess high artistic values; and do not meet the eligibility standards for evaluating Streamline Moderne

[51] U.S. Department of the Interior, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* (Washington, D.C.: National Park Service, as revised 2002).
[52] This is the period of significance for the bungalow court property type as defined in City of Los Angeles, Department of City Planning. "Context: Residential Development and Suburbanization, 1880-1980; Sub-context: Multi-Family Residential Development, 1910-1980; Theme: Multi-Family Residential, 1910-1980; Sub-theme: The Bungalow Court, 1910-1939," in *SurveyLA: Los Angeles Historic Resources Survey Project, Historic Context Statement*, 2017.

residential buildings or the bungalow court property type as outlined by SurveyLA. Therefore, the bungalow courts at 10368-10384 Bellwood Avenue are not eligible under Criterion C/3/3.

The Northern Apartments (10341-10381 Bellwood Avenue)

Criterion A/1/1

The northern apartments at 10341-10381 Bellwood Avenue were constructed in 1951 to fill a need for housing in the period following World War II, and do not conform to any planned development of the area. As noted above, in the postwar period, large swaths of multi-family apartments and condominiums of varying styles and sizes were constructed in West Los Angeles. In many cases, concentrations of multi-family residences acted as infill in earlier tract developments. The northern apartments were constructed as infill on the edge of an earlier single-family residential tract. They do not represent a cohesive or organized development effort associated with a particular period, and no evidence was found to suggest that any important events took place in this location. Therefore, the northern apartments (10341-10381 Bellwood Avenue) are not eligible under Criterion A/1/1.

Criterion B/2/2

No documentation was found to suggest that any former owners or tenants of the northern apartments were significant in local, state, or national history. Paul Cummins was a real estate developer and owned numerous properties and commercial enterprises in Southern California; however, there is no evidence to suggest he made significant contributions to history, and he never resided at the property. Therefore, the northern apartments (10341-10381 Bellwood Avenue) are not eligible under Criterion B/2/2.

Criterion C/3/3

The northern apartments at 10341-10381 Bellwood Avenue were designed in the Mid-century Modern architectural style, with a flat roof with projecting canopies over the second-floor balconies, flush-mounted, metal framed windows and sliding doors, horizontal massing, simple, geometric volumes, and unornamented wall surfaces. However, the complex is a relatively unremarkable example of the style, particularly when compared to other Mid-century Modern multi-family residential buildings in the area and throughout Los Angeles. It does not exhibit quality of design through distinctive details, and it does not represent an excellent or distinctive example of the Mid-century Modern architectural style.

The northern apartments were designed by noted local architect Carl Maston. However, the apartment complex does not represent a distinctive or excellent example of Maston's work, and it does not reflect a significant development or transitional period in his career. There are other examples of Maston's work in the Los Angeles area that are more representative of his body of work and significance as an architect, including the garden apartments at 10565-10567 W. National Boulevard (Ray Kappe and Carl Maston, 1954-1955), which were identified during the West Los Angeles Community Plan Area of SurveyLA as excellent examples of Mid-century

Modern residential architecture in West Los Angeles, and as examples of the work of Kappe and Maston.[53]

The northern apartments do not embody the distinctive characteristics of a style or type; do not represent the work of a master; do not possess high artistic values; and do not meet the eligibility standards for evaluating Mid-century Modern residential buildings as outlined by SurveyLA. Therefore, the northern apartments (10341-10381 Bellwood Avenue) are not eligible under Criterion C/3/3.

[53] Examples of Carl Maston's work in the Los Angeles area can be found at the Pandora Apartments (1946, 744 S. Catalina Street, Los Angeles); Maston/Marmont House (1947; 1657 Marmont Avenue, West Hollywood); Hillside House (1962; 8707 S. Ives Drive, Los Angeles; City of Los Angeles Historic-Cultural Monument No. 688); and Chiat House (1967; 612 Camino Verde, South Pasadena).

The Olympic Boulevard Street Lights, six groupings of street lights spanning 1.6 miles along Olympic Boulevard between Fox Hills Drive and Cotner Avenue, were identified as a potential historical resource during the survey of the West Los Angeles Community Plan Area conducted by SurveyLA in 2012. The streetlights date to 1925 and were evaluated under the context "Public and Private Institutional Development, 1850-1980," the sub-context "Government Infrastructure and services, 1850-1980," the theme "Public Works, 1900-1980," and the sub-theme "Street Lights and the Bureau of Street Lighting, 1900-1980." They were found significant under Criteria A/1/1 and C/3/3, and were assigned the status code of 3S/3CS/5S3 which is defined as "appears eligible for listing in the National Register of Historic Places/the California Register of Historical Resources/and Locally as an individual property through survey evaluation," as an "excellent and intact example of street lighting associated with the Bureau of Street Lighting in West Los Angeles."[54] The Olympic Boulevard Street Lights are therefore treated as historical resources for purposes of this report.

The streetlights are located along both sides of Olympic Boulevard; there are three streetlights located on the south side of Olympic Boulevard at Bellwood Avenue, in the vicinity of the Project Site. In order for a project to have a substantial adverse impact on adjacent historical resources, it must be shown that the integrity and/or significance of the historical resources would be materially impaired. In practical terms, the significance of an historical resource can be materially impaired when the proposed changes to its surroundings substantially impair or obscure the ability of the resource to convey its historical significance such that it would no longer be eligible for listing in the National or California Registers or as a City of Los Angeles Historic-Cultural Monument.

The proposed Project is located along Bellwood Avenue, and does not front Olympic Boulevard. At the western intersection of Olympic Boulevard and Bellwood Avenue, the Project Site is separated from the historic streetlights by the commercial parcels that front Olympic Boulevard and their associated surface parking lots; at the eastern intersection of Olympic and Bellwood, the Project Site is separated from the historic streetlights by multi-story hotel buildings. Therefore, there is adequate separation between the Project Site and the historic streetlights such that the Proposed Project will not impair the integrity or immediate surroundings of the streetlights, or their relationship to Olympic Boulevard. The Project will not materially alter any of the streetlights, which will remain intact in their current locations. While not anticipated, in the event utility work or other offsite infrastructure improvements require work in the area of the Olympic Boulevard Streetlights near the Project Site, one or more of the streetlights could be removed while the work occurs and reinstalled following the completion of the work. The Olympic Boulevard Streetlights will therefore continue to convey their significance and will remain eligible

[54] City of Los Angeles, Department of City Planning, Office of Historic Resources, "Non Parcel Resources," in *Historic Resources Survey Report: West Los Angeles Community Plan Area*, prepared by Sapphos Environmental, Inc., August 2012.

for designation at the federal, state, and local levels following implementation of the Project. [See Figure 2. Map of Olympic Boulevard Street Lights.]

FIGURE 2: OLYMPIC BOULEVARD STREET LIGHTS

View of Olympic Boulevard Street Lights, along the south side of Olympic Boulevard at Bellwood Avenue.

Based on a review of the previous survey findings for the area, the relevant historic contexts, and an analysis under each of the eligibility criteria for designation, the southern apartments (10328-10366 Bellwood Avenue), the bungalow courts (10368-10384 Bellwood Avenue), and the northern apartments (10341-10381 Bellwood Avenue) do not appear eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, or as City of Los Angeles Historic-Cultural Monuments. None of the buildings were identified as potential historic resources by SurveyLA; and none are significant for an association with important events/patterns of development, an association with important people, as an excellent example of an architectural style or property type, or as the work of a master. Therefore, the multi-family residences on the Project Site do not warrant further consideration or additional analysis as historical resources as defined by the California Environmental Quality Act (CEQA), and no mitigation measures are recommended or required.

There is one historical resource located in the vicinity of the Project Site. The Olympic Boulevard Streetlights, identified as eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, and as City of Los Angeles Historic-Cultural Monuments by SurveyLA, span both sides of Olympic Boulevard, including the block where Olympic intersects with Bellwood Avenue. The proposed Project will not result in a substantial adverse impact to the streetlights; they will remain intact and in place following implementation of the Project, and they will continue to convey their historic significance. Therefore, no mitigation measures are recommended or required.

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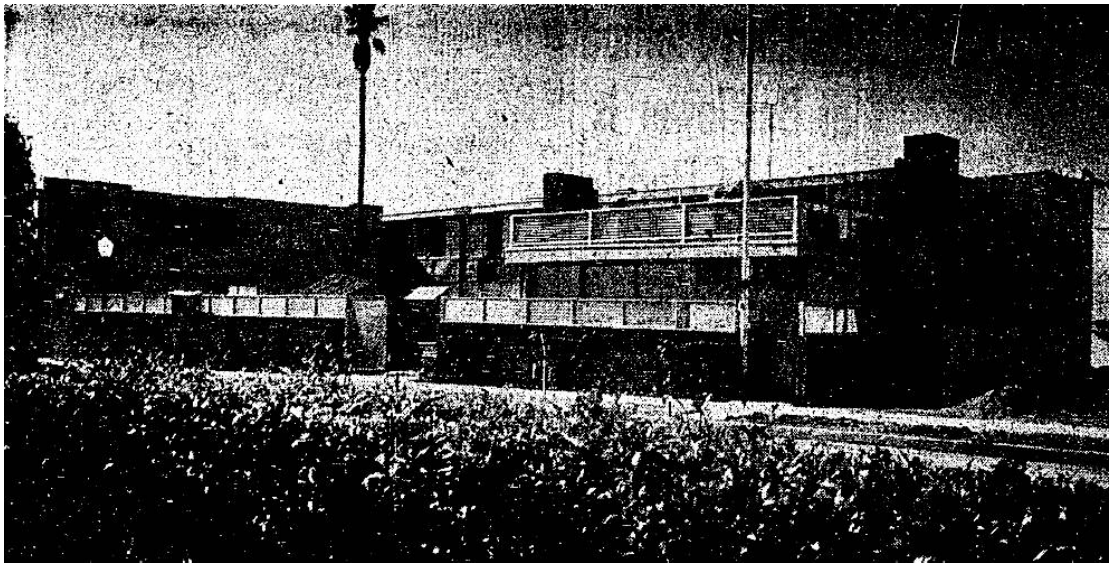
2420
SCALE 100 FT. TO AN INCH
LOUISIANA
AV.
CALVIN
AV.
24120
24122
24123
LAURISTON AV. (OLYMPIC BLVD)
24084
24121
BENECIA
AV.
W.
OLYMPIC
BLVD.
24082
BELLWOOD
AV.
24079
24080
24083
ORTON
AV.
BLVD.
KESWICK
AV.

10341-10381 Bellwood Avenue



North and east view of the "Paul Cummins Patio Apartments," 1952. Source: "Newly Completed," *Los Angeles Times,* December 14, 1952.

HISTORIC RESOURCES GROUP

CHRISTINE LAZZARETTO

MANAGING PRINCIPAL

Years of Experience: 15

Education

Master of Heritage Conservation
University of Southern California

Bachelor of Arts, Art History
Pennsylvania State University

Professional Affiliations

Los Angeles Conservancy

California Preservation Foundation

National Trust for Historic Preservation

Docomomo_US

Experience Profile

Christine Lazzaretto is an Architectural Historian with 15 years of experience in historic preservation in Southern California. Christine joined Historic Resources Group in 2008 and became Managing Principal in 2018. At HRG, Christine works on environmental review, policy development, historic resources surveys, historic context statements, and federal tax credit projects. She has worked on numerous large-scale historic resources surveys, authored a wide range of historic context statements and successful National Register nominations. Her deep understanding of CEQA principles, significance, context and environmental impacts make her a leading expert in cultural resources analysis for environmental review. Christine also manages teams of professional colleagues on large-scale planning efforts.

Selected projects include: Citywide surveys for Beverly Hills, Los Angeles, Modernism in Riverside; Context Statements for City of Pasadena Recent Past, Paso Robles, San Luis Obispo, Beverly Hills, South Pasadena; City of Long Beach Historic Preservation Element; National Register nomination for the University of Southern California; Forum historic tax credit project; Master Plan for University of Southern California.

Prior to joining HRG, Christine worked at Pasadena Heritage as Preservation Director and Program Director, where her responsibilities included administering the Preservation Easement Program; assisting with advocacy efforts; attending local hearings and advising neighborhood groups on preservation issues; conceiving, organizing and implementing all of the organization's highly successful educational tours and programs.

Christine serves on the Board of Trustees of the California Preservation Foundation; she is the Vice-President of the Southern California chapter of Docomomo_US; and she is a lecturer in the University of Southern California Heritage Conservation summer program.

Christine Lazzaretto meets the *Secretary of the Interior's Professional Qualifications Standards* in History and Architectural History.

Selected Project Experience

City of Palm Springs Citywide Survey
City of Santa Monica Citywide Survey Update
Forum Rehabilitation and Historic Tax Credit Project
Paramount Pictures Master Plan, Los Angeles
South Glendale Survey
SurveyLA, City of Los Angeles Citywide Survey
University of Southern California Consulting Services

HISTORIC
RESOURCES
GROUP

Years of Experience: 4

Education

Master of Arts, Historic Preservation, University of Delaware, Newark, 2015

Bachelor of Arts, History and Bachelor of Music in Instrumental Performance, Chapman University, Orange, CA, 2013

Professional Affiliations

Los Angeles Conservancy

Vernacular Architecture Forum

MOLLY IKER-JOHNSON

ASSOCIATE ARCHITECTURAL HISTORIAN

Experience Profile

Molly Iker-Johnson is an Associate Architectural Historian at Historic Resources Group. She has a Bachelor of Arts in History and a Bachelor of Music in Instrumental Performance from Chapman University and a Master of Arts in Historic Preservation from the University of Delaware. She has been with Historic Resources Group since 2014.

Prior to joining HRG, Molly worked as a Graduate Research Assistant for the Center for Historic Architecture and Design, a historic preservation organization located at the University of Delaware. Her responsibilities included assisting with large-format re-photography of early 20th century photographs taken by Delaware seed analyst Roydon Hammond, aiding in the compilation of lists of historically significant sites along Delaware's Byways, and creating photographic databases of historic sites along Delaware's Byways and Newark, Delaware's Main Street. She also worked for such organizations as Chapman University's Honors Program and CBS' Consumer Products division. At HRG, Molly works on historic resources surveys, historic context statements, historic assessments, and National Register nominations. She has worked on several large-scale historic resources surveys, including Citywide survey updates in Palm Springs, South Pasadena, and Santa Monica.

Molly meets the *Secretary of the Interior's Professional Qualifications Standards* in History and Architectural History.

Appendix IS-3

Archaeological and Paleontological Records Searches

South Central Coastal Information Center
California State University, Fullerton
Department of Anthropology MH-426
800 North State College Boulevard
Fullerton, CA 92834-6846
657.278.5395
California Historical Resources Information System
Los Angeles, Orange, Ventura and San Bernardino Counties
sccic@fullerton.edu

3/13/2019 SCCIC File #: 19921.5955

Stephanie Eyestone-Jones
Eyestone Environmental
2121 Rosecrans Ave, Suite 3355
El Segundo, CA 90245

Re: Records Search Results for the Bellwood Project

The South Central Coastal Information Center received your records search request for the project area referenced above, located on the Beverly Hills, CA USGS 7.5' quadrangle. The following summary reflects the results of the records search for the project area and a ½-mile radius. The search includes a review of all recorded archaeological and built-environment resources as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest (SPHI), the California Historical Landmarks (SHL), the California Register of Historical Resources (CAL REG), the National Register of Historic Places (NRHP), the California State Historic Properties Directory (HPD), and the City of Los Angeles Historic-Cultural Monuments (LAHCM) listings were reviewed for the above referenced project site and a ½-mile radius. Due to the sensitive nature of cultural resources, archaeological site locations are not released.

RECORDS SEARCH RESULTS SUMMARY

Archaeological Resources* (*see note below)	Within project area: 0 Within project radius: 1
Built-Environment Resources	Within project area: 0 Within project radius: 12
Reports and Studies	Within project area: 0 Within project radius: 13
OHP Historic Properties Directory (HPD)	Within project area: 0 Within project radius: 2
California Points of Historical Interest (SPHI)	Within project area: 0 Within project radius: 0
California Historical Landmarks (SHL)	Within project area: 0 Within project radius: 0
California Register of Historical Resources (CAL REG)	Within project area: 0 Within project radius: 0
National Register of Historic Places (NRHP)	Within project area: 0 Within project radius: 0

Archaeological Determinations of Eligibility (ADOE):	Within project area: 0 Within project radius: 0
City of Los Angeles Historic-Cultural Monuments (LAHCM)	Within project area: 0 Within project radius: 0

HISTORIC MAP REVIEW – Santa Monica, CA (1902, 1921) 1:62,500 scale historic maps indicated that in 1902 there was a railroad to the north called the Pasadena & Pacific Railroad. There were two improved roads, one of which was in the project area. There were also 5 intermittent streams present and the area was historically known as San Jose de Buenos Ayres. In 1921 the railroad name changed to Pacific Electric Railroad. There were two unimproved roads and several oil wells to the Northeast. All other features mentioned above were still present.

RECOMMENDATIONS

Several of the structures slated for demolition appear to be older than 45 years. Street lamps within the project area also appear to be historic and are found throughout the neighborhood. The project location has not been previously surveyed for the presence of cultural resources. Therefore, in order to assess archaeological sensitivity, an archaeological monitor should be retained to monitor ground-disturbing activities. In the event that cultural resources are observed, all work within the vicinity of the find should be diverted until the archaeologist can assess and record the find and make recommendations. It is also recommended that any structures (45 years and older) be identified, recorded, and evaluated for local, state, or national significance prior to the approval of project plans as may be required by the lead agency. It is also recommended that the Native American Heritage Commission should be consulted to identify if any additional traditional cultural properties or other sacred sites are known to be in the area.

For your convenience, you may find a professional consultant**at www.chrisinfo.org. Any resulting reports by the qualified consultant should be submitted to the South Central Coastal Information Center as soon as possible.

**The SCCIC does not endorse any particular consultant and makes no claims about the qualifications of any person listed. Each consultant on this list self-reports that they meet current professional standards.

If you have any questions regarding the results presented herein, please contact the office at 657.278.5395 Monday through Thursday 9:00 am to 3:30 pm. Should you require any additional information for the above referenced project, reference the SCCIC number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System,

Stacy St. James

Michelle Galaz
Assistant Coordinator

Enclosures:

(X) Invoice # 19921.5955

*=When we report that no archaeological resources are recorded in your project area or within a specified radius around the project area; that does not necessarily mean that nothing is there. It may simply mean that the area has not yet been studied and that no information regarding the archaeological sensitivity of the property is available. The reported records search result does not preclude the possibility that surface or buried artifacts may be found during a survey of the property or ground-disturbing activities.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

29 January 2019

Eyestone Environmental
2121 Rosecrans Avenue, Suite 3355
El Segundo, CA 90245

Attn: Stephanie Eyestone-Jones, President

re: Paleontological resources for the proposed Bellwood Project, in the City of Los Angeles, Los Angeles County, project area

Dear Stephanie:

I have conducted a thorough check of our paleontology collection records for the locality and specimen data for the proposed Bellwood Project, in the City of Los Angeles, Los Angeles County, project area as outlined on the portion of the Beverly Hills USGS topographic quadrangle map that Kevin Varzandeh sent to me via e-mail on 15 January 2019. We do not have any vertebrate fossil localities that lie directly within the proposed project area site boundaries, but we do have vertebrate fossil localities nearby from the same sedimentary deposits that occur in the proposed project area.

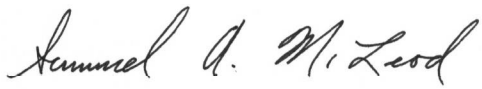
In the very western portion of the proposed project area there are surficial deposits of younger Quaternary Alluvium. These younger Quaternary deposits typically do not contain significant vertebrate fossils in the uppermost layers, but at relatively shallow depth there are older sedimentary deposits that may well contain significant fossil vertebrate remains. In most of the proposed project area though there are surficial deposits of older Quaternary Alluvium, with terrestrial deposits in the northeastern portion and nominally marine deposits in the central and southern portions of the proposed project area. Our closest vertebrate fossil locality in these older Quaternary sediments is LACM 5501, just northeast of the proposed project area south of Olympic Boulevard between Avenue of the Stars and Century Park East, that produced fossil specimens of pond turtle, *Clemmys marmorata*, dog, *Canis*, and horse, *Equus*, at shallow but

unstated depth. Near the intersection of Wilshire Boulevard and Bedford Drive, further northeast of the proposed project area, our localities LACM 3355 and 3821 produced specimens of fossil horse, *Equus*, and even-toed ungulates, Artiodactyla, at a depth of 40 feet below the surface. Our locality LACM 5833, northwest of the proposed project area south of Wilshire Boulevard between Thayer and Westholme Avenues, produced fossils of horse, *Equus*, kangaroo rat, *Dipodomys*, wood rat, *Neotoma*, meadow vole, *Microtus*, and pocket gopher, *Thomomys*, at shallow but unstated depth.

Shallow excavations in the younger Quaternary Alluvium exposed in the very western portion of the proposed project area probably will not uncover significant vertebrate fossils. Deeper excavations in that portion of the proposed project area that extend down into older sedimentary deposits, and any excavations in the older Quaternary deposits exposed in the eastern and southern portions of the proposed project area, however, may well encounter significant vertebrate fossils. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,



Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

Appendix IS-4

Geotechnical Investigation and Geology and Soils Report Approval Letter

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

GEOLOGY AND SOILS REPORT APPROVAL LETTER

December 26, 2018

LOG # 106328
SOILS/GEOLOGY FILE - 2

To: Vincent P. Bertoni, AICP, Deputy Advisory Agency
Department of City Planning
200 N. Spring Street, 7th Floor, Room 750

From: Jesus Adolfo Acosta, Grading Division Chief
Department of Building and Safety

PROPOSED LEGAL: Vesting Tentative Tract No. VTT-82442, Lot 1
CURRENT LEGAL: Tract 7260, Block 13 (Lots 29-37), Block 14 (Lots 10-13)
LOCATION: 10328-10384 W. Bellwood Avenue

CURRENT REFERENCE REPORT/LETTER	REPORT No.	DATE OF DOCUMENT	PREPARED BY
Geology/Soils Report	A9785-06-01	05/31/2018	Geocon West, Inc.

The Grading Division of the Department of Building and Safety has reviewed Vesting Tentative Tract No. 82442 dated 12/06/2018 and the referenced report that provides recommendations for the proposed demolition of all existing site improvements; street vacation/merger, private street and construction of an 8-story eldercare facility (3- to 6-story above grade and 2-story below grade parking) and retaining walls up to 25 feet in height. The earth materials at the subsurface exploration locations consist of up to 11 feet of uncertified fill underlain by alluvium. The consultants recommend to support the proposed structures on conventional foundations bearing on native undisturbed soils.

The Vesting Tentative Tract No. 82442 and the referenced report is acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis ( ) refer to applicable sections of the 2017 City of LA Building Code. P/BC numbers refer the applicable Information Bulletin. Information Bulletins can be accessed on the internet at LADBS.ORG.)

1. The entire site shall be brought up to the current Code standard (7005.9).

2. This approval does not extend to the use of an on-site infiltration systems. If an on-site infiltration system is proposed, the consultant shall provide an evaluation on the items discussed in Information Bulletin P/BC 2017-118 in a supplemental report with plans drawn to scale and suitable for reproduction and archiving purposes that clearly shows the location of the infiltration facility, all property lines, proposed and existing grades and structures, and the location of the proposed infiltration system. The plan shall be provided on the soils consultant's stationary or shall be signed and stamped by the soils engineer. Note: On-site infiltration systems are required to be a minimum of 10 feet (in any direction) from any foundation, and a minimum of 10 feet horizontally from private property lines.

3. Approval shall be obtained from the Department of Public Works, Bureau of Engineering, Development Services and Permits Program for the proposed removal of support and/or retaining of slopes adjoining to public way (3307.3.2).

   1828 Sawtelle Blvd., 3rd Floor, West LA (310) 575-8388

4. Secure the notarized written consent from all owners upon whose property proposed grading/construction access is to extend, in the event off-site grading and/or access for construction purposes is required (7006.6). The consent shall be included as part of the final plans.

5. Provide a notarized letter from all adjoining property owners allowing tie-back anchors on their property (7006.6).

6. The geologist and soils engineer shall review and approve the detailed plans prior to issuance of any permits. This approval shall be by signature on the plans that clearly indicates the geologist and soils engineer have reviewed the plans prepared by the design engineer; and, that the plans include the recommendations contained in their reports (7006.1).

7. All recommendations of the report by Geocon West, Inc. dated 05/31/2018 signed by Jelisa Thomas Adams, GE 3092, and Gerald Kasman, CEG 2251, which in addition to or more restrictive than the conditions contained herein shall also be incorporated into the plans for the project. (7006.1)

8. A copy of the subject and appropriate referenced reports and this approval letter shall be attached to the District Office and field set of plans (7006.1). Submit one copy of the above reports to the Building Department Plan Checker prior to issuance of the permit.

9. A grading permit shall be obtained for all structural fill and retaining wall backfill (106.1.2).

10. All man-made fill shall be compacted to a minimum 90 percent of the maximum dry density of the fill material per the latest version of ASTM D 1557. Where cohesionless soil having less than 15 percent finer than 0.005 millimeters is used for fill, it shall be compacted to a minimum of 95 percent relative compaction based on maximum dry density. Placement of gravel in lieu of compacted fill is only allowed if complying with LAMC Section 91.7011.3.

11. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill (1809.2, 7011.3).

12. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction (7013.12).

13. Grading shall be scheduled for completion prior to the start of the rainy season, or detailed temporary erosion control plans shall be filed in a manner satisfactory to the Grading Division of the Department and the Department of Public Works, Bureau of Engineering, B-Permit Section, for any grading work in excess of 200 cubic yards (7007.1).

14. All loose foundation excavation material shall be removed prior to commencement of framing. Slopes disturbed by construction activities shall be restored (7005.3).

15. Controlled Low Strength Material, CLSM (slurry) proposed to be used for backfill shall satisfy the requirements specified in P/BC 2014-121.

16. The applicant is advised that the approval of this report does not waive the requirements for excavations contained in the General Safety Orders of the California Department of Industrial Relations (3301.1).

17. Temporary excavations that remove lateral support to the public way, adjacent property, or adjacent structures shall be supported by shoring, as recommended. Note: Lateral support shall be considered to be removed when the excavation extends below a plane projected downward at an angle of 45 degrees from the bottom of a footing of an existing structure, from the edge of the public way or an adjacent property. (3307.3.1)

18. Prior to the issuance of any permit that authorizes an excavation where the excavation is to be of a greater depth than are the walls or foundation of any adjoining building or structure and located closer to the property line than the depth of the excavation, the owner of the subject site shall provide the Department with evidence that the adjacent property owner has been given a 30-day written notice of such intent to make an excavation (3307.1).

19. The soils engineer shall review and approve the shoring and/or underpinning plans prior to issuance of the permit (3307.3.2).

20. Prior to the issuance of the permits, the soils engineer and/or the structural designer shall evaluate the surcharge loads used in the report calculations for the design of the retaining walls and shoring. If the surcharge loads used in the calculations do not conform to the actual surcharge loads, the soil engineer shall submit a supplementary report with revised recommendations to the Department for approval.

21. Unsurcharged temporary excavation may be cut vertical up to 5 feet, as recommended. Excavations over 5 feet shall be trimmed back at a uniform gradient not exceeding 1:1, from top to bottom of excavation, as recommended.

22. Shoring shall be designed for the lateral earth pressures specified in the section titled "7.18 Shoring" starting on page 26 of the 05/31/2018 report; all surcharge loads shall be included into the design.

23. Shoring shall be designed for a maximum lateral deflection of ½ inch where a structure is within a 1:1 plane projected up from the base of the excavation, and for a maximum lateral deflection of 1 inch provided there are no structures within a 1:1 plane projected up from the base of the excavation, as recommended.

24. A shoring monitoring program shall be implemented to the satisfaction of the soils engineer.

25. All foundations shall derive entire support from native undisturbed soils, as recommended and approved by the soils engineer by inspection.

26. Footings supported on approved compacted fill or expansive soil shall be reinforced with a minimum of four (4), ½-inch diameter (#4) deformed reinforcing bars. Two (2) bars shall be placed near the bottom and two (2) bars placed near the top of the footing.

27. The foundation/slab design shall satisfy all requirements of the Information Bulletin P/BC 2014-116 "Foundation Design for Expansive Soils" (1803.5.3).

28. Slabs placed on approved compacted fill shall be at least 5 inches thick, as recommended, and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 16 inches on center each way.

29. Concrete floor slabs placed on expansive soil shall be placed on a 4-inch fill of coarse aggregate or on a moisture barrier membrane. The slabs shall be at least 5 inches thick, as recommended, and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 16 inches on center each way.

30. The seismic design shall be based on a Site Class D, as recommended. All other seismic design parameters shall be reviewed by LADBS building plan check.

31. Retaining walls shall be designed for the lateral earth pressures specified in the section titled "7.12 Retaining Wall Design" starting on page 22 of the 05/31/2018 report. All surcharge loads shall be included into the design.

32. All retaining walls shall be provided with a standard surface backdrain system and all drainage shall be conducted in a non-erosive device to the street in an acceptable manner (7013.11).

33. With the exception of retaining walls designed for hydrostatic pressure, all retaining walls shall be provided with a subdrain system to prevent possible hydrostatic pressure behind the wall. Prior to issuance of any permit, the retaining wall subdrain system recommended in the soils report shall be incorporated into the foundation plan which shall be reviewed and approved by the soils engineer of record (1805.4).

34. Installation of the subdrain system shall be inspected and approved by the soils engineer of record and the City grading/building inspector (108.9).

35. Basement walls and floors shall be waterproofed/damp-proofed with an LA City approved "Below-grade" waterproofing/damp-proofing material with a research report number (104.2.6).

36. Prefabricated drainage composites (Miradrain, Geotextiles) may be only used in addition to traditionally accepted methods of draining retained earth.

37. The structure shall be connected to the public sewer system per P/BC 2014-027.

38. All concentrated drainage shall be conducted in an approved device and disposed of in a manner approved by the LADBS (7013.10).

39. Any recommendations prepared by the geologist and/or the soils engineer for correction of geological hazards found during grading shall be submitted to the Grading Division of the Department for approval prior to use in the field (7008.2, 7008.3).

40. The geologist and soils engineer shall inspect all excavations to determine that conditions anticipated in the report have been encountered and to provide recommendations for the correction of hazards found during grading (7008 & 1705.6).

41. Prior to pouring concrete, a representative of the consulting soils engineer shall inspect and approve the footing excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the work inspected meets the conditions of the report. No concrete shall be poured until the LADBS Inspector has also inspected and approved the footing excavations. A written certification to this effect shall be filed with the Grading Division of the Department upon completion of the work. (108.9 & 7008.2)

42. Prior to excavation an initial inspection shall be called with the LADBS Inspector. During the initial inspection, the sequence of construction; shoring; underpinning; protection fences; and, dust and traffic control will be scheduled (108.9.1).

43. Installation of shoring, underpinning, slot cutting and/or pile excavations shall be performed under the inspection and approval of the soils engineer and deputy grading inspector (1705.6, 1705.8).

44. The installation and testing of tie-back anchors shall comply with the recommendations included in the report or the standard sheets titled "Requirement for Tie-back Earth Anchors", whichever is more restrictive. [Research Report #23835]

45. Prior to the placing of compacted fill, a representative of the soils engineer shall inspect and approve the bottom excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the soil inspected meets the conditions of the report. No fill shall be placed until the LADBS Inspector has also inspected and approved the bottom excavations. A written certification to this effect shall be included in the final compaction report filed with the Grading Division of the Department. All fill shall be placed under the inspection and approval of the soils engineer. A compaction report together with the approved soil report and Department approval letter shall be submitted to the Grading Division of the Department upon completion of the compaction. In addition, an Engineer's Certificate of Compliance with the legal description as indicated in the grading permit and the permit number shall be included (7011.3).

46. No footing/slab shall be poured until the compaction report is submitted and approved by the Grading Division of the Department.

cl FOR DRE
CLJ/DRE:clj/dre
Log No. 106328
213-482-0480

cc: The T.B.E. Revocable Trust, Owner
Rosenheim & Associates, Applicant
Geocon West, Inc., Project Consultant
WL District Office

GEOTECHNICAL INVESTIGATION

PROPOSED SENIOR ASSISTED LIVING FACILITY
10328-10384 W. BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

TRACT: TR 7260
BLOC□: 13 LOTS: 29 – 37
BLOC□: 14 LOTS: 10 – 13

GEOCON
WEST, INC.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

SBLP DEVELOPMENT, LLC
DALLAS, TE□AS

PRO□ECT NO. A9785-06-01

MAY 31, 2018

Project No. A9785-06-01
May 31, 2018

SBLP Development, LLC
4514 Cole Avenue, Suite 1500
Dallas, Texas 75205

Attention: Mr. Joseph McGonigle

Subject: GEOTECHNICAL INVESTIGATION
PROPOSED SENIOR ASSISTED LIVING FACILITY
10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA
TRACT: TR 7260, BLOCK: 13, LOTS: 29 – 37
BLOCK: 14, LOTS: 10 – 13

Dear Mr. McGonigle:

In accordance with your authorization of our proposal dated March 14, 2018, we have performed a geotechnical investigation for the proposed senior assisted living facility located at 10328-10384 West Bellwood Avenue in the City of Los Angeles, California. The accompanying report presents the findings of our study, and our conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction. Based on the results of our investigation, it is our opinion that the site can be developed as proposed, provided the recommendations of this report are followed and implemented during design and construction.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.

REGISTERED PROFESSIONAL ENGINEER
PETRINA ZEN
C87489
CIVIL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JELISA THOMAS ADAMS
GE3092
GEOTECHNICAL
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PROFESSIONAL GEOLOGIST
GERALD KASMAN
NO. 2251
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Petrina Zen	Jelisa Thomas Adams	Gerald Kasman
PE 87489	GE 3092	CEG 2251

(EMAIL) Addressee

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GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a geotechnical investigation for the proposed senior assisted living facility located at 10328-10384 West Bellwood Avenue in the City of Los Angeles, California (see Vicinity Map, Figure 1). The purpose of the investigation was to evaluate subsurface soil and geologic conditions underlying the site and, based on conditions encountered, to provide conclusions and recommendations pertaining to the geotechnical aspects of design and construction.

The scope of this investigation included a site reconnaissance, field exploration, laboratory testing, engineering analysis, and the preparation of this report. The site was explored on May 7, 2018, by excavating three 8-inch diameter borings to depths of approximately 30½ and 40½ feet below the existing ground surface utilizing a limited-access hollow-stem auger drilling machine. The approximate locations of the exploratory borings are depicted on the Site Plan (see Figure 2). A detailed discussion of the field investigation, including the boring logs, is presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical and chemical soil properties. Appendix B presents a summary of the laboratory test results.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the *List of References* section.

If project details vary significantly from those described herein, Geocon should be contacted to determine the necessity for review and possible revision of this report.

2. SITE AND PROJECT DESCRIPTION

The subject site is located at 10328-10384 West Bellwood Avenue in the City of Los Angeles, California. The site is currently occupied by several one- to two-story multi-family residential and commercial structures and associated surface parking. The site also includes a portion of West Bellwood Avenue. The site is bounded by West Olympic Boulevard and commercial structures to the northwest, and by single-family residential structures to the east, west, and south. The topography within the subject site is relatively level. There is approximately 10-15 foot increase in elevation from the rear of the subject property site to the properties to the south. This change in elevation is comprised of both a slope and retaining wall.

Surface water drainage at the site appears to be by sheet flow along the existing ground contours to the city streets. Vegetation onsite consists of grass and trees, which are located in landscaping areas.

Based on the information provided by the Client, it is our understanding that the proposed development will include approximately 250 units of senior assisted living with one to two levels of subterranean parking. The proposed structures will be four to six stories in height. It is assumed that the proposed subterranean parking levels will extend approximately 12 or 25 feet below the existing ground surface, for one and two levels of subterranean parking respectively and including foundation depths. It is our further understanding that the portion of Bellwood Avenue which falls within the site boundaries will be abandoned. Due to the preliminary nature of the project, formal plans depicting the proposed development are not available for inclusion in this report. The existing site conditions are depicted on the Site Plan (see Figure 2).

Based on the preliminary nature of the design at this time, wall and column loads were not available. It is anticipated that column loads for the proposed structure will be up to 800 kips, and wall loads will be up to 10 kips per linear foot.

Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. GEOLOGIC SETTING

The site is located in the northwestern portion of the Los Angeles Basin, a coastal plain bounded by the Santa Monica Mountains on the north, the Elysian Hills and Repetto Hills on the northeast, the Puente Hills and Whittier Fault on the east, the Palos Verdes Peninsula and Pacific Ocean on the west and south, and the Santa Ana Mountains and San Joaquin Hills on the southeast. The basin is underlain by a deep structural depression which has been filled by both marine and continental sedimentary deposits underlain by a basement complex of igneous and metamorphic composition (Yerkes, et al., 1965). Regionally, the site is located near the boundary of the Peninsular Ranges geomorphic province and the Transverse Ranges geomorphic province. The Peninsular Ranges geomorphic province is characterized by northwest-trending physiographic and geologic features such as the nearby Newport-Inglewood Fault Zone in contrast to the Transverse Ranges that is characterized by east-west trending physiographic and geologic features such as the nearby Santa Monica Fault Zone.

4. SOIL AND GEOLOGIC CONDITIONS

Based on our field investigation and published geologic maps of the area, the site is underlain by artificial fill and unconsolidated to semi-consolidated Pleistocene age alluvial and marine terrace deposits predominantly consisting of sand and sandy silt with occasional lenses of well graded sand and gravel (Dibblee, 1991; California Geological Survey [CGS], 2012). Detailed stratigraphic profiles of the materials encountered at the site are provided on the boring logs in Appendix A.

4.1 Artificial Fill

Artificial fill was encountered in borings B-2 and B-3 to depths of four feet beneath the existing ground surface. Artificial fill was encountered to a maximum depth of 10.7 feet beneath the ground surface in boring B-1 and may represent a localized deeper fill condition. The artificial fill generally consists of brown sand and silty sand. The fill can be characterized as slightly moist and medium dense. The fill is likely the result of past grading or construction activities at the site. Deeper fill may exist between excavations and in other portions of the site that were not directly explored.

4.2 Alluvium

Pleistocene age alluvium and marine terrace deposits (Dibblee, 1991) was encountered beneath the fill. The alluvium generally consists of yellowish brown to light brown sand, sandy silt and sand with silt with varying amounts of gravel and trace cobbles (observed to a maximum of 5 inches in size). The alluvial soils are primarily fine- to medium-grained with some well graded sand layers. The alluvial soils are characterized as slightly moist and medium dense to very dense or hard.

5. GROUNDWATER

Review of the Seismic Hazard Zone Report for the Beverly Hills Quadrangle (California Division of Mines and Geology [CDMG], 1998) indicates the historically highest groundwater level in the area is greater than 40 feet beneath the ground surface. Groundwater information presented in this document is generated from data collected in the early 1900's to the late 1990s. Based on current groundwater basin management practices, it is unlikely that groundwater levels will ever exceed the historic high levels.

Groundwater was not encountered in our borings, drilled to a maximum depth of 40½ feet below the existing ground surface. Based on the lack of groundwater in our borings, groundwater is neither expected to be encountered during construction, nor have a detrimental effect on the project. However, it is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. In addition, recent requirements for stormwater infiltration could result in shallower seepage conditions in the immediate site vicinity. Proper surface drainage of irrigation and precipitation will be critical for future performance of the project. Recommendations for drainage are provided in the S*urface Drainage* section of this report (see Section 7.24).

6. GEOLOGIC HA□ARDS

6.1 Surface Fault Rupture

The numerous faults in Southern California include active, potentially active, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program (CGS, 2018a). By definition, an active fault is one that has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years), but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a state-designated Alquist-Priolo Earthquake Fault Zone (CGS, 2018b) for surface fault rupture hazards. No active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the site or in the immediate site vicinity. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. However, the site is located in the seismically active Southern California region, and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. The faults in the vicinity of the site are shown in Figure 3, Regional Fault Map.

The closest surface trace of an active fault to the site is the Santa Monica Fault Zone located approximately 2,900 feet (0.5 mile) to the northwest (CGS, 2018c). Other nearby active faults include the Newport-Inglewood Fault and the Hollywood Fault located approximately 1.8 miles to the southeast and 2.8 miles to the north-northeast (CGS, 2018c). The active San Andreas Fault Zone is located approximately 39 miles northeast of the site (Ziony and Jones, 1989).

Several buried thrust faults, commonly referred to as blind thrusts, underlie the Los Angeles Basin at depth. These faults are not exposed at the ground surface and are typically identified at depths greater than 3.0 kilometers. The October 1, 1987 M_w 5.9 Whittier Narrows earthquake and the January 17, 1994 M_w 6.7 Northridge earthquake were a result of movement on the Puente Hills Blind Thrust and the Northridge Thrust, respectively. These thrust faults and others in the Los Angeles area are not exposed at the surface and do not present a potential surface fault rupture hazard at the site; however, these deep thrust faults are considered active features capable of generating future earthquakes that could result in moderate to significant ground shaking at the site.

6.2 Seismicity

As with all of Southern California, the site has experienced historic earthquakes from various regional faults. The seismicity of the region surrounding the site was formulated based on research of an electronic database of earthquake data. The epicenters of recorded earthquakes with magnitudes equal to or greater than 5.0 in the site vicinity are depicted on Figure 4, Regional Seismicity Map. A partial list of moderate to major magnitude earthquakes that have occurred in the Southern California area within the last 100 years is included in the following table.

LIST OF HISTORIC EARTH□UA□ES

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
San Jacinto-Hemet area	April 21, 1918	6.8	84	ESE
Near Redlands	July 23, 1923	6.3	67	E
Long Beach	March 10, 1933	6.4	40	SE
Tehachapi	July 21, 1952	7.5	74	NW
San Fernando	February 9, 1971	6.6	25	N
Whittier Narrows	October 1, 1987	5.9	19	E
Sierra Madre	June 28, 1991	5.8	28	ENE
Landers	June 28, 1992	7.3	114	E
Big Bear	June 28, 1992	6.4	91	E
Northridge	January 17, 1994	6.7	13	NW
Hector Mine	October 16, 1999	7.1	128	ENE

The site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in Southern California and the effects of ground shaking can be mitigated if the proposed structures are designed and constructed in conformance with current building codes and engineering practices.

6.3 Seismic Design Criteria

The following table summarizes summarizes site-specific design criteria obtained from the 2016 California Building Code (CBC; Based on the 2015 International Building Code [IBC] and ASCE 7-10), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the computer program *U.S. Seismic Design Maps*, provided by the USGS. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.3.2 of the 2016 CBC and Table 20.3-1 of ASCE 7-10. The values presented below are for the risk-targeted maximum considered earthquake (MCE_R).

2016 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2016 CBC Reference
Site Class	D	Section 1613.3.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	2.193g	Figure 1613.3.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.814g	Figure 1613.3.1(2)
Site Coefficient, F_A	1.0	Table 1613.3.3(1)
Site Coefficient, F_V	1.5	Table 1613.3.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	2.193g	Section 1613.3.3 (Eqn 16-37)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	1.220g	Section 1613.3.3 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.462g	Section 1613.3.4 (Eqn 16-39)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.814g	Section 1613.3.4 (Eqn 16-40)

The table below presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-10.

ASCE 7-10 PEA GROUND ACCELERATION

Parameter	Value	ASCE 7-10 Reference
Mapped MCE_G Peak Ground Acceleration, PGA	0.832g	Figure 22-7
Site Coefficient, F_{PGA}	1.0	Table 11.8-1
Site Class Modified MCE_G Peak Ground Acceleration, PGA_M	0.832g	Section 11.8.3 (Eqn 11.8-1)

The Maximum Considered Earthquake Ground Motion (MCE) is the level of ground motion that has a 2 percent chance of exceedance in 50 years, with a statistical return period of 2,475 years. According to the 2016 California Building Code and ASCE 7-10, the MCE is to be utilized for the evaluation of liquefaction, lateral spreading, seismic settlements, and it is our understanding that the intent of the Building code is to maintain "Life Safety" during a MCE event. The Design Earthquake Ground Motion (DE) is the level of ground motion that has a 10 percent chance of exceedance in 50 years, with a statistical return period of 475 years.

Deaggregation of the MCE peak ground acceleration was performed using the USGS online Unified Hazard Tool, 2008 Conterminous U.S. Dynamic edition. The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as a 6.79 magnitude event occurring at a hypocentral distance of 5.41 kilometers from the site.

Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, and the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 6.73 magnitude occurring at a hypocentral distance of 11.2 kilometers from the site.

Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

6.4 Li□uefaction Potential

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations.

The current standard of practice, as outlined in the "Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California" and "Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California" requires liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

The State of California Seismic Hazard Zone Map for the Los Angeles Quadrangle (CDMG, 1998, CGS, 2018b) indicates that the site is not located in an area designated as having a potential for liquefaction. In addition, a review of the County of Los Angeles Seismic Safety Element (Leighton, 1990) indicates that the site is not located within an area identified as having a potential for liquefaction. Based on these considerations, it is our opinion that the potential for liquefaction and associated ground deformations beneath the site is very low.

6.5 Slope Stability

The City of Los Angeles General Plan (2008) and the County of Los Angeles Safety Element (Leighton, 1990) indicate that the site is not located within an area identified to have a potential for slope instability. Additionally, the site is not within an area identified as having a potential for seismic slope instability (CDMG, 1999, CGS, 2018b). There are no known landslides near the site, nor is the site in the path of any known or potential landslides. Therefore, the potential for slope stability hazards to adversely affect the proposed development is considered low.

The topography within the subject site is relatively level. There is approximately 10- to 15-foot increase in elevation from the rear of the site to the properties to the south. The natural soils underlying the site and surrounding area consist of horizontally stratified alluvial sediments which lack any well-defined planar features (such as bedding or joints) that could act as planes of weakness. This condition is considered favorable with respect to gross stability. We assume that retaining walls or other retaining structures will be incorporated into the design of the proposed development.

6.6 Earth□uake-Induced Flooding

Earthquake-induced flooding is inundation caused by failure of dams or other water-retaining structures due to earthquakes. Based on a review of the Los Angeles County Safety Element (Leighton, 1990), the site is not located within a potential inundation area for an earthquake-induced dam failure. The probability of earthquake-induced flooding is considered very low.

6.7 Tsunamis, Seiches, and Flooding

The site is not located within a coastal area. Therefore, tsunamis, seismic sea waves, are not considered a significant hazard at the site.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Therefore, flooding resulting from a seismically-induced seiche is considered unlikely.

The site is within an area of minimal flooding (Zone X) as defined by the Federal Emergency Management Agency (FEMA, 2018: LACDPW, 2018).

6.8 Oil Fields & Methane Potential

Based on a review of the California Division of Oil, Gas and Geothermal Resources (DOGGR) Well Finder Website (DOGGR, 2018), the site is located within the Cheviot Hills Oil Field. The nearest well to the site is the Chevron U.S.A. Inc Well Number 321F, a plugged oil and gas production well, located approximately 1,600 feet to the east (DOGGR, 2018). Due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map. Undocumented wells could be encountered during construction. Any wells encountered will need to be properly abandoned in accordance with the current requirements of the DOGGR.

Since the site is within the Cheviot Hills Oil Field, there could be a potential for methane and other volatile gases to occur at the site which may require a permanent methane gas control system beneath the proposed buildings. Should it be determined that a methane study is required for the proposed development it is recommended that a qualified methane consultant be retained to perform the study and provide mitigation measures as necessary.

6.9 Subsidence

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. The site is not located within an area of known ground subsidence. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the site or in the general site vicinity. There appears to be little or no potential for ground subsidence due to withdrawal of fluids or gases at the site.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 General

7.1.1 It is our opinion that neither soil nor geologic conditions were encountered during the investigation that would preclude construction of the proposed project provided the recommendations presented herein are followed and implemented during design and construction.

7.1.2 Up to 10.7 feet of existing artificial fill was encountered during the site investigation. The existing fill encountered is believed to be the result of past grading and construction activities at the site. The existing fill and site soils are suitable for re-use as engineered fill, if needed, provided the recommendations in the *Grading* section of this report are followed (see Section 7.4). Excavations for the subterranean levels are anticipated to penetrate through the existing artificial fill and expose undisturbed alluvial soils throughout the excavation bottom.

7.1.3 Due to the preliminary nature of the project, formal plans depicting the proposed development are not available for inclusion in this report. The proposed development will be constructed over either one or two levels of subterranean parking. It is assumed that the proposed subterranean parking levels will extend approximately 12 or 25 feet below the existing ground surface, respectively, including foundation depths.

7.1.4 There is approximately 10- to 15-foot increase in elevation from the south and southeast property lines to the offsite properties to the south. This change in elevation is comprised of both a slope and retaining wall. Given the preliminary nature of the project at this time, formal plans depicting the proposed improvements with respect to the offsite elevations are not available at this time. Once this information becomes available, additional and/or revised recommendations may be necessary.

7.1.5 Groundwater was not encountered during site exploration and the current groundwater table is sufficiently deep that it not expected to be encountered during construction. However, local seepage could be encountered during excavation of the subterranean level, especially if conducted during the rainy season.

7.1.6 Based on these considerations, the proposed structure may be supported on conventional foundation system deriving support in the competent alluvium found at and below a depth of 12 feet. Foundations should be deepened as necessary to penetrate through soft or unsuitable alluvium at the direction of the Geotechnical Engineer. All foundation excavations must be observed and approved by the Geotechnical Engineer (a representative of Geocon), prior to placing steel or concrete. Recommendations for the design of a conventional foundation system are provided in Section 7.6.

7.1.7 Excavations up to 25 feet in vertical height are anticipated for construction of the subterranean levels, including foundation depths. Due to the depth of the excavation and the proximity to the property lines, city streets and adjacent offsite structures, excavation of the proposed subterranean level will likely require sloping and shoring measures in order to provide a stable excavation. Where shoring is required it is recommended that a soldier pile shoring system be utilized. In addition, where the proposed excavation will be deeper than and adjacent to an offsite structure, the proposed shoring should be designed to resist the surcharge imposed by the adjacent offsite structure. Recommendations for shoring are provided in Section 7.18 of this report.

7.1.8 Due to the nature of the proposed design and intent for a subterranean level, waterproofing of subterranean walls and slabs is suggested. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

7.1.9 Foundations for small outlying structures, such as block walls up to 6 feet high, planter walls or trash enclosures, which will not be tied to the proposed structure, may be supported on conventional foundations bearing on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed or is undesirable, foundations may derive support directly in the undisturbed alluvial soils, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved in writing by a Geocon representative. The design team and contractor should be aware that the depth to undisturbed alluvial soils may be on the order of 4 feet or greater; recommendations for the design and construction of miscellaneous foundations should be reevaluated once formal project plans are available.

7.1.10 Based on the results of percolation testing performed at the site, a stormwater infiltration system is considered feasible for this project. Recommendations for infiltration are provided in the *Stormwater Infiltration* section of this report (see Section 7.23).

7.1.11 Once the design and foundation loading configuration for the proposed structure proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Based on the final foundation loading configurations, the potential for settlement should be reevaluated by this office.

7.1.12 Any changes in the design, location or elevation of improvements, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

7.2 Soil and Excavation Characteristics

7.2.1 The in-situ soils can be excavated with moderate effort using conventional excavation equipment. Some caving should be anticipated in unshored excavations, especially where granular soils are encountered.

7.2.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations to maintain safety and maintain the stability of adjacent existing improvements.

7.2.3 All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping or shoring. Excavation recommendations are provided in the *Temporary Excavations* section of this report (see Section 7.17).

7.2.4 Based on the depth of the proposed subterranean level and granular nature of the site soils, the proposed structure would not be prone to the effects of expansive soils.

7.3 Minimum Resistivity, pH, and Water-Soluble Sulfate

7.3.1 Potential of Hydrogen (pH) and resistivity testing as well as chloride content testing were performed on representative samples of soil to generally evaluate the corrosion potential to surface utilities. The tests were performed in accordance with California Test Method Nos. 643 and 422 and indicate that the soils are considered “corrosive” with respect to corrosion of buried ferrous metals on site. The results are presented in Appendix B (Figure B7) and should be considered for design of underground structures. Due to the corrosive potential of the soils, it is recommended that ABS pipes are utilized in lieu of cast-iron for subdrains and retaining wall drains beneath the structure.

7.3.2 Laboratory tests were performed on representative samples of the site materials to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B7) and indicate that the on-site materials possess "negligible" sulfate exposure to concrete structures as defined by 2016 CBC Section 1904 and ACI 318-11 Sections 4.2 and 4.3.

7.3.3 Geocon West, Inc. does not practice in the field of corrosion engineering and mitigation. If corrosion sensitive improvements are planned, it is recommended that a corrosion engineer be retained to evaluate corrosion test results and incorporate the necessary precautions to avoid premature corrosion of buried metal pipes and concrete structures in direct contact with the soils.

7.4 Grading

7.4.1 Grading is anticipated to include excavation of site soils for the proposed subterranean level foundations and utility trenches, as well as placement of backfill for walls, ramps, and trenches.

7.4.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer, geotechnical engineer, and, if applicable, building official in attendance. Special soil handling requirements can be discussed at that time.

7.4.3 Earthwork should be observed, and compacted fill tested by representatives of Geocon West, Inc. The existing fill encountered during exploration is suitable for re-use as an engineered fill, provided any encountered oversize material (greater than 6 inches) and any encountered deleterious debris is removed.

7.4.4 Grading should commence with the removal of all existing vegetation and existing improvements from the area to be graded. Deleterious debris such as wood and root structures should be exported from the site and should not be mixed with the fill soils. Asphalt and concrete should not be mixed with the fill soils unless approved by the Geotechnical Engineer. All existing underground improvements planned for removal should be completely excavated and the resulting depressions properly backfilled in accordance with the procedures described herein. Once a clean excavation bottom has been established it must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.) and the City of Los Angeles Inspector.

7.4.5 The foundation system for the proposed structure may derive support in the competent alluvial soils found at and below a depth of 12 feet. Foundations should be deepened as necessary to penetrate through existing fill or soft soils at the direction of the Geotechnical Engineer.

7.4.6 If construction is performed during the rainy season and the excavation bottom becomes saturated, stabilization measures may have to be implemented to prevent excessive disturbance the excavation bottom. Should this condition exist, rubber tire equipment should not be allowed in the excavation bottom until it is stabilized or extensive soil disturbance could result.

7.4.7 Subgrade stabilization may be accomplished by placing a thin lift of 3- to 6-inch-diameter crushed angular rock into the soft excavation bottom. The use of crushed concrete will also be acceptable. The crushed rock should be spread thinly across the excavation bottom and pressed into the soils by track rolling or wheel rolling with heavy equipment. It is very important that voids between the rock fragments are not created so the rock must be thoroughly pressed or blended into the soils. All subgrade soils must be properly compacted and proof-rolled in the presence of the Geotechnical Engineer (a representative of Geocon West, Inc.).

7.4.8 The City of Los Angeles Department of Building and Safety requires a minimum compactive effort of 95 percent of the laboratory maximum dry density in accordance with ASTM D 1557 (latest edition) where the soils to be utilized in the fill have less than 15 percent finer than 0.005 millimeters. Soils with more than 15 percent finer than 0.005 millimeters may be compacted to 90 percent of the laboratory maximum dry density in accordance with ASTM D 1557 (latest edition). Based on the soils encountered during this investigation, it is anticipated that 95 percent relative compaction will be required. All fill and backfill soils should be placed in horizontal loose layers approximately 6 to 8 inches thick, moisture conditioned to optimum moisture content, and properly compacted to the required degree of compaction in accordance with ASTM D 1557 (latest edition).

7.4.9 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures, which will not be tied to the proposed structure, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, foundations may derive support directly in the competent undisturbed alluvial soils and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. The design team and contractor should be aware that the depth to undisturbed alluvial soils may be on the order of 4 feet or greater; recommendations for the design and construction of miscellaneous foundations should be reevaluated once formal project plans are available.

7.4.10 Although not anticipated for this project, all imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site. Rocks larger than 6 inches in diameter shall not be used in the fill. If necessary, import soils used as structural fill should have an expansion index less than 20 and corrosivity properties that are equally or less detrimental to that of the existing onsite soils (see Figure B7).

7.4.11 Utility trenches should be properly backfilled in accordance with the requirements of the Green Book (latest edition). The pipe should be bedded with clean sands (Sand Equivalent greater than 30) to a depth of at least 1 foot over the pipe, and the bedding material must be inspected and approved in writing by the Geotechnical Engineer (a representative of Geocon). The use of gravel is not acceptable unless used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of 2-sack slurry as backfill is also acceptable (see Section 7.5). Prior to placing any bedding materials or pipes, the excavation bottom must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

7.4.12 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding materials, fill, steel, gravel, or concrete.

7.5 Controlled Low Strength Material (CLSM)

7.5.1 Controlled Low Strength Material (CLSM) may be utilized in lieu of compacted soil as engineered fill where approved in writing by the Geotechnical Engineer. Where utilized within the City of Los Angeles use of CLSM is subject to the following requirements:

Standard Re□uirements

1. CLSM shall be ready-mixed by a City of Los Angeles approved batch plant;
2. CLSM shall not be placed on uncertified fill, on incompetent natural soil, nor below water;
3. CLSM shall not be placed on a sloping surface with a gradient steeper than 5:1 (horizontal to vertical);
4. Placement of the CLSM shall be under the continuous inspection of a concrete deputy inspector;
5. The excavation bottom shall be accepted by the soil engineer and the City Inspector prior to placing CLSM.

Re uirements for CLSM that will be used for support of footings

1. The cement content of the CLSM shall not be less than 188 pounds per cubic yard (min. 2 sacks);
2. The excavation bottom must be level, cleaned of loose soils and approved in writing by Geocon prior to placement of the CLSM;
3. The ultimate compressive strength of the CLSM shall be no less than 100 pounds per square inch when tested on the 28th-day per ASTM D4832 (latest edition), Standard Test Method for Preparation and Testing of Controlled Low Strength Material Test Cylinders. Compression testing will be performed in accordance with ASTM C39 and City of Los Angeles requirements;
4. Samples of the CLSM will be collected during placement, a minimum of one test (two cylinders) for each 50 cubic yards or fraction thereof;
5. Overexcavation for CLSM placement shall extend laterally beyond the footprint of any proposed footings as required for placement of compacted fill, unless justified otherwise by the soil engineer that footings will have adequate vertical and horizontal bearing capacity.

7.6 Foundation Design

7.6.1 The proposed structure may be supported on a conventional spread foundation system deriving support in the competent alluvium found at and below a depth of 12 feet. Foundations should be deepened as necessary to penetrate through soft or unsuitable alluvium at the direction of the Geotechnical Engineer. All foundation excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing steel or concrete.

7.6.2 Continuous footings may be designed for an allowable bearing capacity of 2,500 pounds per square foot (psf), and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

7.6.3 Isolated spread foundations may be designed for an allowable bearing capacity of 3,000 psf, and should be a minimum of 24 inches in width, 18 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

7.6.4 The allowable soil bearing pressure above may be increased by 250 psf and 500 psf for each additional foot of foundation width and depth, respectively, up to a maximum allowable soil bearing pressure of 4,500 psf.

7.6.5 The allowable bearing pressures may be increased by one-third for transient loads due to wind or seismic forces.

7.6.6 If depth increases are utilized for the exterior wall footings, this office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.

7.6.7 Continuous footings should be reinforced with four No. 4 steel reinforcing bars, two placed near the top of the footing and two near the bottom. Reinforcement for spread footings should be designed by the project structural engineer.

7.6.8 The above foundation dimensions and minimum reinforcement recommendations are based on soil conditions and building code requirements only, and are not intended to be used in lieu of those required for structural purposes.

7.6.9 No special subgrade presaturation is required prior to placement of concrete. However, the slab and foundation subgrade should be sprinkled as necessary; to maintain a moist condition as would be expected in any concrete placement.

7.6.10 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.

7.6.11 This office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.

7.7 Foundation Settlement

7.7.1 The maximum expected static settlement for a structure supported on a conventional foundation system deriving support in the recommended bearing materials at a depth of 12 feet, and designed with a maximum bearing pressure of 4,500 psf is estimated to be less than 1½ inches and occur below the heaviest loaded structural element. Settlement of the foundation system is expected to occur on initial application of loading. Differential settlement is not expected to exceed ¾ inch over a distance of 20 feet.

7.7.2 Once the design and foundation loading configurations for the proposed structures proceeds to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

7.8 Miscellaneous Foundations

7.8.1 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures which will not be tied to the proposed structure may be supported on conventional foundations bearing on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, such as adjacent to property lines, foundations may derive support in the undisturbed alluvial soils and should be deepened as necessary to maintain a minimum 12-inch embedment into undisturbed alluvial soils and must be observed and approved by a Geocon representative. The design team and contractor should be aware that the depth to undisturbed alluvial soils may be on the order of 4 feet or greater; recommendations for the design and construction of miscellaneous foundations should be reevaluated once formal project plans are available.

7.8.2 If the soils exposed in the excavation bottom are soft, compaction of the soft soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. Miscellaneous foundations may be designed for a bearing value of 1,500 psf, and should be a minimum of 12 inches in width, 36 inches in depth below the lowest adjacent grade and 12 inches into the recommended bearing material. The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.

7.8.3 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated.

7.9 Lateral Design

7.9.1 Resistance to lateral loading may be provided by friction acting at the base of foundations, slabs and by passive earth pressure. An allowable coefficient of friction of 0.4 may be used with the dead load forces in the competent alluvial soils or in properly compacted engineered fill.

7.9.2 Passive earth pressure for the sides of foundations and slabs poured against competent alluvial soils or newly placed engineered fill may be computed as an equivalent fluid having a density of 280 pounds per cubic foot (pcf) with a maximum earth pressure of 2,800 psf. When combining passive and friction for lateral resistance, the passive component should be reduced by one-third.

7.10 Concrete Slabs-on-Grade

7.10.1 Unless specifically evaluated and designed by a qualified structural engineer, the slab-on-grade subject to vehicle loading should be a minimum of 5 inches of concrete reinforced with No. 4 steel reinforcing bars placed 16 inches on center in both horizontal directions and positioned vertically near the slab midpoint. The concrete slab-on-grade and ramp may derive support directly on the undisturbed alluvial soils at the excavation bottom as well as compacted soils, if necessary. Any disturbed soils should be properly compacted for slab support. Soil placed and compacted for ramp and slab support should be moisture conditioned to optimum moisture content and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition) for ramp support.

7.10.2 Slabs-on-grade at the ground surface that may receive moisture-sensitive floor coverings or may be used to store moisture-sensitive materials should be underlain by a vapor retarder placed directly beneath the slab. The vapor retarder and acceptable permeance should be specified by the project architect or developer based on the type of floor covering that will be installed. The vapor retarder design should be consistent with the guidelines presented in Section 9.3 of the American Concrete Institute's (ACI) Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials (ACI 302.2R-06) and should be installed in general conformance with ASTM E 1643 (latest edition) and the manufacturer's recommendations. A minimum thickness of 15 mils extruded polyolefin plastic is recommended; vapor retarders which contain recycled content or woven materials are not recommended. The vapor retarder should have a permeance of less than 0.01 perms demonstrated by testing before and after mandatory conditioning. The vapor retarder should be installed in direct contact with the concrete slab with proper perimeter seal. If the Los Angeles Green Building Code requirements apply to this project, the vapor retarder should be underlain by 4 inches of clean aggregate. It is important that the vapor retarder be puncture resistant since it will be in direct contact with angular gravel. As an alternative to the clean aggregate suggested in the Los Angeles Green Building Code, it is our opinion that the concrete slab-on-grade may be underlain by a vapor retarder over 4 inches of clean sand (sand equivalent greater than 30), since the sand will serve a capillary break and will minimize the potential for punctures and damage to the vapor barrier.

7.10.3 Due to the nature of the proposed design and intent for a subterranean level, waterproofing of subterranean walls and slabs is suggested. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing

consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

7.10.4 For seismic design purposes, a coefficient of friction of 0.4 may be utilized between concrete slabs and subgrade soils without a moisture barrier, and 0.15 for slabs underlain by a moisture barrier.

7.10.5 Exterior slabs for walkways or flatwork, not subject to traffic loads, should be at least 4 inches thick and reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions, positioned near the slab midpoint. Prior to construction of slabs, the upper 12 inches of subgrade should be moistened to optimum moisture content and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Crack control joints should be spaced at intervals not greater than 10 feet and should be constructed using saw-cuts or other methods as soon as practical following concrete placement. Crack control joints should extend a minimum depth of one-fourth the slab thickness. The project structural engineer should design construction joints as necessary.

7.10.6 The recommendations of this report are intended to reduce the potential for cracking of slabs due to settlement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to minor soil movement and/or concrete shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

7.11 Preliminary Pavement Recommendations

7.11.1 Where new paving is to be placed, it is recommended that all existing fill and soft or unsuitable alluvial materials be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing artificial fill and soft alluvium in the area of new paving is not required; however, paving constructed over existing unsuitable material may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of paving subgrade should be scarified, moisture conditioned to optimum moisture content, and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition).

7.11.2 The following pavement sections are based on an assumed R-Value of 20. Once site grading activities are complete an R-Value should be obtained by laboratory testing to confirm the properties of the soils serving as paving subgrade, prior to placing pavement.

7.11.3 The Traffic Indices listed below are estimates. Geocon does not practice in the field of traffic engineering. The actual Traffic Index for each area should be determined by the project civil engineer. If pavement sections for Traffic Indices other than those listed below are required, Geocon should be contacted to provide additional recommendations. Pavement thicknesses were determined following procedures outlined in the *California Highway Design Manual* (Caltrans). It is anticipated that the majority of traffic will consist of automobile and large truck traffic.

PRELIMINARY PAVEMENT DESIGN SECTIONS

Location	Estimated Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)
Automobile Parking and Driveways	4.0	3.0	4.0
Trash Truck & Fire Lanes	7.0	4.0	12.0

7.11.4 Asphalt concrete should conform to Section 203-6 of the "*Standard Specifications for Public Works Construction*" (Green Book). Class 2 aggregate base materials should conform to Section 26-1.02A of the "*Standard Specifications of the State of California, Department of Transportation*" (Caltrans). The use of Crushed Miscellaneous Base (CMB) in place of Class 2 aggregate base is acceptable. Crushed Miscellaneous Base should conform to Section 200-2.4 of the "*Standard Specifications for Public Works Construction*" (Green Book).

7.11.5 Unless specifically designed and evaluated by the project structural engineer, where exterior concrete paving will be utilized for support of vehicles, it is recommended that the concrete be a minimum of 6 inches of concrete reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Concrete paving supporting vehicular traffic should be underlain by a minimum of 4 inches of aggregate base and a properly compacted subgrade. The subgrade and base material should be compacted to 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition).

7.11.6 The performance of pavements is highly dependent upon providing positive surface drainage away from the edge of pavements. Ponding of water on or adjacent to the pavement will likely result in saturation of the subgrade materials and subsequent cracking, subsidence and pavement distress. If planters are planned adjacent to paving, it is recommended that the perimeter curb be extended at least 12 inches below the bottom of the aggregate base to minimize the introduction of water beneath the paving.

7.12 Retaining Wall Design

7.12.1 The recommendations presented below are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 25 feet. In the event that walls higher than 25 feet are planned, Geocon should be contacted for additional recommendations.

7.12.2 Retaining wall foundations may be designed in accordance with the recommendations provided in the *Foundation Design* section of this report (see Section 7.6).

7.12.3 Retaining walls with a level backfill surface that are not restrained at the top should be designed utilizing a triangular distribution of pressure (active pressure). Restrained walls are those that are not allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Where walls are restrained from movement at the top, walls may be designed utilizing a triangular distribution of pressure (at-rest pressure). The table below presents recommended pressures to be used in retaining wall design, assuming that proper drainage will be maintained. Calculation of the recommended retaining wall pressures is provided on Figures 5 and 6.

RETAINING WALL WITH LEVEL BAC□FILL SURFACE

HEIGHT OF RETAINING WALL (Feet)	ACTIVE PRESSURE EQUIVALENT FLUID PRESSURE (Pounds Per Cubic Foot)	AT-REST PRESSURE EQUIVALENT FLUID PRESSURE (Pounds Per Cubic Foot)
Up to 12	30	50
Up to 25	44	64

7.12.4 The wall pressures provided above assume that the retaining wall will be properly drained preventing the buildup of hydrostatic pressure. If retaining wall drainage is not implemented, the equivalent fluid pressure to be used in design of undrained walls is 90 pcf. The value includes hydrostatic pressures plus buoyant lateral earth pressures.

7.12.5 The wall pressures provided above assume that the proposed retaining walls will support relatively undisturbed alluvial soils. If sloping techniques are to be utilized for construction of proposed walls, which would result in a wedge of engineered fill behind the retaining walls, revised earth pressures may be required, especially if the wall backfill does not consist of the existing onsite soils. This should be evaluated once the use of sloping measures is established and once the geotechnical characteristics of the engineered backfill soils can be further evaluated.

7.12.6 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures and should be designed for each condition as the project progresses.

7.12.7 It is recommended that line-load surcharges from adjacent wall footings, use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$For\ {}^{x}/_{H} \leq 0.4$$

$$\sigma_H(z) = \frac{0.20 \times \left(\frac{z}{H}\right)}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

and

$$For\ {}^{x}/_{H} > 0.4$$

$$\sigma_H(z) = \frac{1.28 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

where x is the distance from the face of the excavation or wall to the vertical line-load, H is the distance from the bottom of the footing to the bottom of excavation or wall, z is the depth at which the horizontal pressure is desired, Q_L is the vertical line-load and $\sigma_H(z)$ is the horizontal pressure at depth z.

7.12.8 It is recommended that vertical point-loads, from construction equipment outriggers or adjacent building columns use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$For\ {}^{x}/_{H} \leq 0.4$$

$$\sigma_H(z) = \frac{0.28 \times \left(\frac{z}{H}\right)^2}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

and

$$For\ {}^{x}/_{H} > 0.4$$

$$\sigma_H(z) = \frac{1.77 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)^2}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

then

$$\sigma'_H(z) = \sigma_H(z) cos^2(1.1\theta)$$

where x is the distance from the face of the excavation/wall to the vertical point-load, H is distance from the outrigger/bottom of column footing to the bottom of excavation, z is the depth at which the horizontal pressure is desired, Q_P is the vertical point-load, $\sigma_H(z)$ is the horizontal pressure at depth z, θ is the angle between a line perpendicular to the excavation/wall and a line from the point-load to location on the excavation/wall where the surcharge is being evaluated, and $\sigma_H(z)$ is the horizontal pressure at depth z.

7.12.9 In addition to the recommended earth pressure, the upper 10 feet of the subterranean wall adjacent to the street and parking lot should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the walls due to normal street traffic. If the traffic is kept back at least 10 feet from the subterranean walls, the traffic surcharge may be neglected.

7.12.10 Seismic lateral forces should be incorporated into the design as necessary, and recommendations for seismic lateral forces are presented below.

7.13 Dynamic (Seismic) Lateral Forces

7.13.1 The structural engineer should determine the seismic design category for the project in accordance with Section 1613 of the CBC. If the project possesses a seismic design category of D, E, or F, proposed retaining walls in excess of 6 feet in height should be designed with seismic lateral pressure (Section 1803.5.12 of the 2016 CBC).

7.13.2 A seismic load of 10 pcf should be used for design of walls that support more than 6 feet of backfill in accordance with Section 1803.5.12 of the 2016 CBC. The seismic load is applied as an equivalent fluid pressure along the height of the wall and the calculated loads result in a maximum load exerted at the base of the wall and zero at the top of the wall. This seismic load should be applied in addition to the active earth pressure. The earth pressure is based on half of two thirds of PGA_M calculated from ASCE 7-10 Section 11.8.3.

7.14 Retaining Wall Drainage

7.14.1 Retaining walls should be provided with a drainage system. At the base of the drain system, a subdrain covered with a minimum of 12 inches of gravel should be installed, and a compacted fill blanket or other seal placed at the surface (see Figure 7). The clean bottom and subdrain pipe, behind a retaining wall, should be observed by the Geotechnical Engineer (a representative of Geocon), prior to placement of gravel or compacting backfill.

7.14.2 As an alternative, a plastic drainage composite such as Miradrain or equivalent may be installed in continuous, 4-foot wide columns along the entire back face of the wall, at 8 feet on center. The top of these drainage composite columns should terminate approximately 18 inches below the ground surface, where either hardscape or a minimum of 18 inches of relatively cohesive material should be placed as a cap (see Figure 8). These vertical columns of drainage material would then be connected at the bottom of the wall to a collection panel or a 1-cubic-foot rock pocket drained by a 4-inch subdrain pipe.

7.14.3 Subdrainage pipes at the base of the retaining wall drainage system should outlet to an acceptable location via controlled drainage structures.

7.14.4 Moisture affecting below grade walls is one of the most common post-construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence or standing water. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

7.15 Elevator Pit Design

7.15.1 The elevator pit slab and retaining wall should be designed by the project structural engineer. Elevator pits may be designed in accordance with the recommendations in the *Foundation Design* and *Retaining Wall Design* section of this report (see Sections 7.6 and 7.12).

7.15.2 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic, or adjacent foundations and should be designed for each condition as the project progresses.

7.15.3 If retaining wall drainage is to be provided, the drainage system should be designed in accordance with the *Retaining Wall Drainage* section of this report (see Section 7.14).

7.15.4 It is suggested that the exterior walls and slab be waterproofed to prevent excessive moisture inside of the elevator pit. Waterproofing design and installation is not the responsibility of the geotechnical engineer.

7.16 Elevator Piston

7.16.1 If a plunger-type elevator piston is installed for this project, a deep drilled excavation will be required. It is important to verify that the drilled excavation is not situated immediately adjacent to a foundation or shoring pile, or the drilled excavation could compromise the existing foundation or pile support, especially if the drilling is performed subsequent to the foundation or pile construction.

7.16.2 Casing may be required if caving is experienced in the drilled excavation. The contractor should be prepared to use casing and should have it readily available at the commencement of drilling activities. Continuous observation of the drilling and installation of the elevator piston by the Geotechnical Engineer (a representative of Geocon West, Inc.) is required.

7.16.3 The annular space between the piston casing and drilled excavation wall should be filled with a minimum of 1½-sack slurry pumped from the bottom up. As an alternative, pea gravel may be utilized. The use of soil to backfill the annular space is not acceptable.

7.17 Temporary Excavations

7.17.1 Excavations up to 25 feet in height are anticipated for excavation and construction of the proposed subterranean levels and foundation system. The excavations are expected to expose alluvial soils, which are suitable for vertical excavations up to 5 feet where loose soils or caving sands are not present or where not surcharged by adjacent traffic or structures.

7.17.2 Vertical excavations greater than 5 feet will require sloping and/or shoring measures in order to provide a stable excavation. Where sufficient space is available, temporary unsurcharged embankments could be sloped back at a uniform 1:1 slope gradient or flatter, up to a maximum of 12 feet in height. A uniform slope does not have a vertical portion. Where space is limited, shoring measures will be required. *Shoring* data is provided in Section 7.18 of this report.

7.17.3 Where sloped embankments are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary construction embankments are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. Geocon personnel should inspect the soils exposed in the cut slopes during excavation so that modifications of the slopes can be made if variations in the soil conditions occur. All excavations should be stabilized within 30 days of initial excavation.

7.18 Shoring – Soldier Pile Design and Installation

7.18.1 The following information on the design and installation of shoring is preliminary. Review of the final shoring plans and specifications should be made by this office prior to bidding or negotiating with a shoring contractor.

7.18.2 One method of shoring would consist of steel soldier piles, placed in drilled holes and backfilled with concrete. The steel soldier piles may also be installed utilizing high frequency vibration. Where maximum excavation heights are less than 12 feet the soldier piles are typically designed as cantilevers. Where excavations exceed 12 feet or are surcharged, soldier piles may require lateral bracing utilizing drilled tie-back anchors or raker braces to maintain an economical steel beam size and prevent excessive deflection. The size of the steel beam, the need for lateral bracing, and the acceptable shoring deflection should be determined by the project shoring engineer.

7.18.3 The design embedment of the shoring pile toes must be maintained during excavation activities. The toes of the perimeter shoring piles should be deepened to take into account any required excavations necessary for grading activities, foundations, and/or adjacent drainage systems.

7.18.4 The proposed soldier piles may also be designed as permanent piles. The required pile depths, dimensions, and spacing should be determined and designed by the project structural and shoring engineers. All piles utilized for shoring can also be incorporated into a permanent retaining wall system (shotcrete wall) and should be designed in accordance with the earth pressure provided in the *Retaining Wall Design* section of this report (see Section 7.12).

7.18.5 Drilled cast-in-place soldier piles should be placed no closer than three diameters on center. The minimum diameter of the piles is 18 inches. Structural concrete should be used for the soldier piles below the excavation; lean-mix concrete may be employed above that level. As an alternative, lean-mix concrete may be used throughout the pile where the reinforcing consists of a wideflange section. The slurry must be of sufficient strength to impart the lateral bearing pressure developed by the wideflange section to the soil. For design purposes, an allowable passive value for the soils below the bottom plane of excavation may be assumed to be 280 psf per foot. Where piles are installed by vibration techniques, the passive pressure may be assumed to mobilize across a width equal to the two times the dimension of the beam flange. The allowable passive value may be doubled for isolated piles, spaced a minimum of three times the pile diameter. To develop the full lateral value, provisions should be implemented to assure firm contact between the soldier piles and the undisturbed alluvium.

7.18.6 Groundwater was not encountered during site exploration. However, it is not uncommon for groundwater or seepage conditions to develop where none previously existed. Therefore the contractor should be prepared for groundwater during pile installation should the need arise. If more than 6 inches of water is present in the bottom of the excavation, a tremie is required to place the concrete into the bottom of the hole. A tremie should consist of a rigid, water-tight tube having a diameter of not less than 6 inches with a hopper at the top. The tube should be equipped with a device that will close the discharge end and prevent water from entering the tube while it is being charged with concrete. The tremie should be supported so as to permit free movement of the discharge end over the entire top surface of the work and to permit rapid lowering when necessary to retard or stop the flow of concrete. The discharge end should be closed at the start of the work to prevent water entering the tube and should be entirely sealed at all times, except when the concrete is being placed. The tremie tube should be kept full of concrete. The flow should be continuous until the work is completed and the resulting concrete seal should be monolithic and homogeneous. The tip of the tremie tube should always be kept about 5 feet below the surface of the concrete and definite steps and safeguards should be taken to insure that the tip of the tremie tube is never raised above the surface of the concrete.

7.18.7 A special concrete mix should be used for concrete to be placed below water. The design should provide for concrete with an unconfined compressive strength psi of 1,000 pounds per square inch (psi) over the initial job specification. An admixture that reduces the problem of segregation of paste/aggregates and dilution of paste should be included. The slump should be commensurate to any research report for the admixture, provided that it should also be the minimum for a reasonable consistency for placing when water is present.

7.18.8 Casing may be required if caving is experienced, and the contractor should have casing available prior to commencement of pile excavation. When casing is used, extreme care should be employed so that the pile is not pulled apart as the casing is withdrawn. At no time should the distance between the surface of the concrete and the bottom of the casing be less than 5 feet. As an alternative, piles may be vibrated into place; however, there is always a risk that excessive vibrations in sandy soils could induce settlements and distress to adjacent offsite improvements. Continuous observation of the drilling and pouring of the piles by the Geotechnical Engineer (a representative of Geocon West, Inc.), is required.

7.18.9 If a vibratory method of solider pile installation is utilized, predrilling may be performed prior to installation of the steel beams. If predrilling is performed, it is recommended that the bore diameter be at least 2 inches smaller than the largest dimension of the pile to prevent excessive loss in the frictional component of the pile capacity. Predrilling should not be conducted below the proposed excavation bottom.

7.18.10 If a vibratory method is utilized, the owner should be aware of the potential risks associated with vibratory efforts, which typically involve inducing settlement within the vicinity of the pile which could result in a potential for damage to existing improvements in the area.

7.18.11 The level of vibration that results from the installation of the piles should not exceed a threshold where occupants of nearby structures are disturbed, despite higher vibration tolerances that a building may endure without deformation or damage. The main parameter used for vibration assessment is peak particle velocity in units of inch per second (in/sec). The acceptable range of peak particle velocity should be evaluated based on the age and condition of adjacent structures, as well as the tolerance of human response to vibration.

7.18.12 Based on Table 19 of the *Transportation and Construction Induced Vibration Guidance Manual* (Caltrans 2013), a continuous source of vibrations (ex. vibratory pile driving) which generates a maximum peak particle velocity of 0.5 in/sec is considered tolerable for modern industrial/commercial buildings and new residential structures. The Client should be aware that a lower value may be necessary if older or fragile structures are in the immediate vicinity of the site.

7.18.13 Vibrations should be monitored and record with seismographs during pile installation to detect the magnitude of vibration and oscillation experienced by adjacent structures. If the vibrations exceed the acceptable range during installation, the shoring contractor should modify the installation procedure to reduce the values to within the acceptable range. Vibration monitoring is not the responsibility of the Geotechnical Engineer.

7.18.14 Geocon does not practice in the field of vibration monitoring. If construction techniques will be implemented, it is recommended that qualified consultant be retained to provide site specific recommendations for vibration thresholds and monitoring.

7.18.15 The frictional resistance between the soldier piles and retained soil may be used to resist the vertical component of the anchor load. The coefficient of friction may be taken as 0.4 based on uniform contact between the steel beam and lean-mix concrete and retained earth. The portion of soldier piles below the plane of excavation may also be employed to resist the downward loads. The downward capacity may be determined using a frictional resistance of 480 psf per foot.

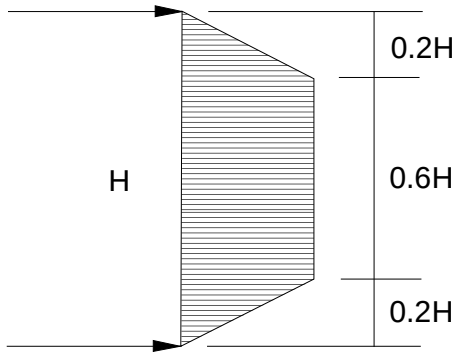
7.18.16 Due to the nature of the site soils, it is expected that continuous lagging between soldier piles will be required. However, it is recommended that the exposed soils be observed by the Geotechnical Engineer (a representative of Geocon West, Inc.), to verify the presence of any competent, cohesive soils and the areas where lagging may be omitted.

7.18.17 The time between lagging excavation and lagging placement should be as short as possible soldier piles should be designed for the full-anticipated pressures. Due to arching in the soils, the pressure on the lagging will be less. It is recommended that the lagging be designed for the full design pressure but be limited to a maximum of 400 psf.

7.18.18 For the design of unbraced shoring, it is recommended that an equivalent fluid pressure be utilized for design. A trapezoidal distribution of lateral earth pressure may be used where shoring will be restrained by bracing or tie backs. The recommended active and trapezoidal pressure are provided in the following table. A diagram depicting the trapezoidal pressure distribution of lateral earth pressure is provided below the table. Calculation of the recommended shoring pressure is provided in Figures 9 and 10.

HEIGHT OF SHORING (FEET)	EQUIVALENT FLUID PRESSURE (Pounds Per Cubic Foot) (ACTIVE PRESSURE)	EQUIVALENT FLUID PRESSURE Trapezoidal (Where H is the height of the shoring in feet)
Up to 12	25	16H
Up to 25	36	23H

Trapezoidal Distribution of Pressure



7.18.19 It is very important to note that active pressures can only be achieved when movement in the soil (earth wall) occurs. If movement in the soil is not acceptable, such as adjacent to an existing structure, an at-rest pressure of 45 and 59 pcf should be considered for the design of 12 foot and 25 foot high shoring, respectively.

7.18.20 Where a combination of sloped embankment and shoring is utilized, the pressure will be greater and must be determined for each combination. Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic, or adjacent structures and must be determined for each combination.

7.18.21 It is recommended that line-load surcharges from adjacent wall footings, use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$For\ {}^{x}/_{H} \leq 0.4$$

$$\sigma_H(z) = \frac{0.20 \times \left(\frac{z}{H}\right)}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

and

$$For\ {}^{x}/_{H} > 0.4$$

$$\sigma_H(z) = \frac{1.28 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

where x is the distance from the face of the excavation or wall to the vertical line-load, H is the distance from the bottom of the footing to the bottom of excavation or wall, z is the depth at which the horizontal pressure is desired, Q_L is the vertical line-load and $\sigma_H(z)$ is the horizontal pressure at depth z.

7.18.22 It is recommended that vertical point-loads, from construction equipment outriggers or adjacent building columns use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$For\ {}^{x}/_{H} \leq 0.4$$

$$\sigma_H(z) = \frac{0.28 \times \left(\frac{z}{H}\right)^2}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

and

$$For\ {}^{x}/_{H} > 0.4$$

$$\sigma_H(z) = \frac{1.77 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)^2}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

then

$$\sigma'_H(z) = \sigma_H(z) cos^2(1.1\theta)$$

where x is the distance from the face of the excavation/wall to the vertical point-load, H is distance from the outrigger/bottom of column footing to the bottom of excavation, z is the depth at which the horizontal pressure is desired, Q_p is the vertical point-load, $\sigma_H(z)$ is the horizontal pressure at depth z, θ is the angle between a line perpendicular to the excavation/wall and a line from the point-load to location on the excavation/wall where the surcharge is being evaluated, and $\sigma_H(z)$ is the horizontal pressure at depth z.

7.18.23 In addition to the recommended earth pressure, the upper 10 feet of the shoring adjacent to the street or driveway areas should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the shoring due to normal street traffic. If the traffic is kept back at least ten feet from the shoring, the traffic surcharge may be neglected.

7.18.24 It is difficult to accurately predict the amount of deflection of a shored embankment. It should be realized that some deflection will occur. It is recommended that the deflection be minimized to prevent damage to existing structures and adjacent improvements. Where public right-of-ways are present or adjacent offsite structures do not surcharge the shoring excavation, the shoring deflection should be limited to less than 1 inch at the top of the shored embankment. Where offsite structures are within the shoring surcharge area it is recommended that the beam deflection be limited to less than ½ inch at the elevation of the adjacent offsite foundation, and no deflection at all if deflections will damage existing structures. The allowable deflection is dependent on many factors, such as the presence of structures and utilities near the top of the embankment, and will be assessed and designed by the project shoring engineer.

7.18.25 Because of the depth of the excavation, some means of monitoring the performance of the shoring system is suggested. The monitoring should consist of periodic surveying of the lateral and vertical locations of the tops of all soldier piles and the lateral movement along the entire lengths of selected soldier piles.

7.18.26 Due to the depth of the depth of the excavation and proximity to adjacent structures, it is suggested that prior to excavation the existing improvements be inspected to document the present condition. For documentation purposes, photographs should be taken of preconstruction distress conditions and level surveys of adjacent grade and pavement should be considered. During excavation activities, the adjacent structures and pavement should be periodically inspected for signs of distress. In the even that distress or settlement is noted, an investigation should be performed and corrective measures taken so that continued or worsened distress or settlement is mitigated. Documentation and monitoring of the offsite structures and improvements is not the responsibility of the geotechnical engineer.

7.19 Temporary Tie-Back Anchors

7.19.1 Temporary tie-back anchors may be used with the solider pile wall system to resist lateral loads. Post-grouted friction anchors are recommended. For design purposes, it may be assumed that the active wedge adjacent to the shoring is defined by a plane drawn 35 degrees with the vertical through the bottom plane of the excavation. Friction anchors should extend a minimum of 20 feet beyond the potentially active wedge and to greater lengths if necessary to develop the desired capacities. The locations and depths of all offsite utilities should be thoroughly checked and incorporated into the drilling angle design for the tie-back anchors.

7.19.2 The capacities of the anchors should be determined by testing of the initial anchors as outlined in a following section. Only the frictional resistance developed beyond the active wedge would be effective in resisting lateral loads. Anchors should be placed at least 6 feet on center to be considered isolated. For preliminary design purposes, it is estimated that drilled friction anchors constructed without utilizing post-grouting techniques will develop average skin frictions as follows:

- 7 feet below the top of the excavation – 800 pounds per square foot
- 15 feet below the top of the excavation –1,300 pounds per square foot

7.19.3 Depending on the techniques utilized, and the experience of the contractor performing the installation, a maximum allowable friction capacity of 2.5 kips per linear foot for post-grouted anchors (for a minimum 20-foot length beyond the active wedge) may be assumed for design purposes. Only the frictional resistance developed beyond the active wedge should be utilized in resisting lateral loads.

7.20 Anchor Installation

7.20.1 Tied-back anchors are typically installed between 20 and 40 degrees below the horizontal; however, occasionally alternative angles are necessary to avoid existing improvements and utilities. The locations and depths of all offsite utilities should be thoroughly checked prior to design and installation of the tie-back anchors. Caving of the anchor shafts, particularly within sand and gravel deposits or seepage zones, should be anticipated during installation and provisions should be implemented in order to minimize such caving. It is suggested that hollow-stem auger drilling equipment be used to install the anchors. The anchor shafts should be filled with concrete by pumping from the tip out, and the concrete should extend from the tip of the anchor to the active wedge. In order to minimize the chances of caving, it is recommended that the portion of the anchor shaft within the active wedge be backfilled with sand before testing the anchor. This portion of the shaft should be filled tightly and flush with the face of the excavation. The sand backfill should be placed by pumping; the sand may contain a small amount of cement to facilitate pumping.

7.21 Anchor Testing

7.21.1 All of the anchors should be tested to at least 150 percent of design load. The total deflection during this test should not exceed 12 inches. The rate of creep under the 150 percent test load should not exceed 0.1 inch over a 15-minute period in order for the anchor to be approved for the design loading.

7.21.2 At least 10 percent of the anchors should be selected for "quick" 200 percent tests and three additional anchors should be selected for 24-hour 200 percent tests. The purpose of the 200 percent tests is to verify the friction value assumed in design. The anchors should be tested to develop twice the assumed friction value. These tests should be performed prior to installation of additional tiebacks. Where satisfactory tests are not achieved on the initial anchors, the anchor diameter and/or length should be increased until satisfactory test results are obtained.

7.21.3 The total deflection during the 24-hour 200 percent test should not exceed 12 inches. During the 24-hour tests, the anchor deflection should not exceed 0.75 inches measured after the 200 percent test load is applied.

7.21.4 For the "quick" 200 percent tests, the 200 percent test load should be maintained for 30 minutes. The total deflection of the anchor during the 200 percent quick tests should not exceed 12 inches; the deflection after the 200 percent load has been applied should not exceed 0.25 inch during the 30-minute period.

7.21.5 After a satisfactory test, each anchor should be locked-off at the design load. This should be verified by rechecking the load in the anchor. The load should be within 10 percent of the design load. A representative of this firm should observe the installation and testing of the anchors.

7.22 Internal Bracing

7.22.1 Rakers may be utilized to brace the soldier piles in lieu of tieback anchors. The raker bracing could be supported laterally by temporary concrete footings (deadmen) or by the permanent, interior footings. For design of such temporary footings or deadmen, poured with the bearing surface normal to rakers inclined at 45 degrees, a bearing value of 2,000 psf may be used, provided the shallowest point of the footing is at least 1 foot below the lowest adjacent grade. The structural engineer should review the shoring plans to determine if raker footings conflict with the structural foundation system. The client should be aware that the utilization of rakers could significantly impact the construction schedule due to their intrusion into the construction site and potential interference with equipment.

7.23 Stormwater Infiltration

7.23.1 During the May 7, 2018, site exploration, boring B1 was utilized to perform percolation testing. The boring was advanced to the depth listed in the table below. Slotted casing was placed in the boring, and the annular space between the casing and excavation was filled with gravel. The boring was then filled with water to pre-saturate the soils. On May 8, 2018, the casing was refilled with water and percolation test readings were performed after repeated flooding of the cased excavation. Based on the test results, the measured percolation rate and design infiltration rate, for the earth materials encountered, are provided in the following table. These values have been calculated in accordance with the Boring Percolation Test Procedure in the County of Los Angeles Department of Public Works GMED *Guidelines for Geotechnical Investigation and Reporting, Low Impact Development Stormwater Infiltration* (June 2017). Percolation test field data and calculation of the measured percolation rate and design infiltration rate are provided on Figure 11.

Boring	Soil Type	Infiltration Depth (ft)	Measured Percolation Rate (in / hour)	Design Infiltration Rate (in / hour)
B1	Sand (SP)	20-30½	2.54	1.27

7.23.2 Based on the test method utilized (Boring Percolation Test), the reduction factor RF_t may be taken as 2.0 in the infiltration system design. Based on the number of tests performed and consistency of the soils throughout the site, it is suggested that the reduction factor RF_v be taken as 1.0. In addition, provided proper maintenance is performed to minimize long-term siltation and plugging, the reduction factor RF_s may be taken as 1.0. Additional reduction factors may be required and should be applied by the engineer in responsible charge of the design of the stormwater infiltration system and based on applicable guidelines.

7.23.3 The results of the percolation testing indicate that the soils at depths in the above table are conductive to infiltration. It is our opinion that the soil zone encountered at the depth and location as listed in the table above are suitable for infiltration of stormwater.

7.23.4 It is our further opinion that infiltration of stormwater and will not induce excessive hydro-consolidation (see Figures B3 through B6), will not create a perched groundwater condition, will not affect soil structure interaction of existing or proposed foundations due to expansive soils, will not saturate soils supported by existing or proposed retaining walls, and will not increase the potential for liquefaction. Resulting settlements are anticipated to be less than ¼ inch, if any.

7.23.5 The infiltration system must be located such that the closest distance between an adjacent foundation is at least 10 feet in all directions from the zone of saturation. The zone of saturation may be assumed to project downward from the discharge of the infiltration facility at a gradient of 1:1. Additional property line or foundation setbacks may be required by the governing jurisdiction and should be incorporated into the stormwater infiltration system design as necessary.

7.23.6 Where the 10-foot horizontal setback cannot be maintained between the infiltration system and an adjacent footing, and the infiltration system penetrates below the foundation influence line, the proposed stormwater infiltration system must be designed to resist the surcharge from the adjacent foundation. The foundation surcharge line may be assumed to project down away from the bottom of the foundation at a 1:1 gradient. The stormwater infiltration system must still be sufficiently deep to maintain the 10-foot vertical offset between the bottom of the footing and the zone of saturation.

7.23.7 Subsequent to the placement of the infiltration system, it is acceptable to backfill the resulting void space between the excavation sidewalls and the infiltration system with minimum two-sack slurry provided the slurry is not placed in the infiltration zone. It is recommended that pea gravel be utilized adjacent to the infiltration zone so communication of water to the soil is not hindered.

7.23.8 Due to the preliminary nature of the project at this time, the type of stormwater infiltration system and location of the stormwater infiltration systems has not yet been determined. The design drawings should be reviewed and approved by the Geotechnical Engineer. The installation of the stormwater infiltration system should be observed and approved by the Geotechnical Engineer (a representative of Geocon).

7.24 Surface Drainage

7.24.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.

7.24.2 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2016 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within five feet of the building perimeter. Planters

which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeter footings except when enclosed in protected planters.

7.24.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures.

7.25 Plan Review

7.25.1 Grading, foundation, and shoring plans should be reviewed by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon West, Inc.

2. This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

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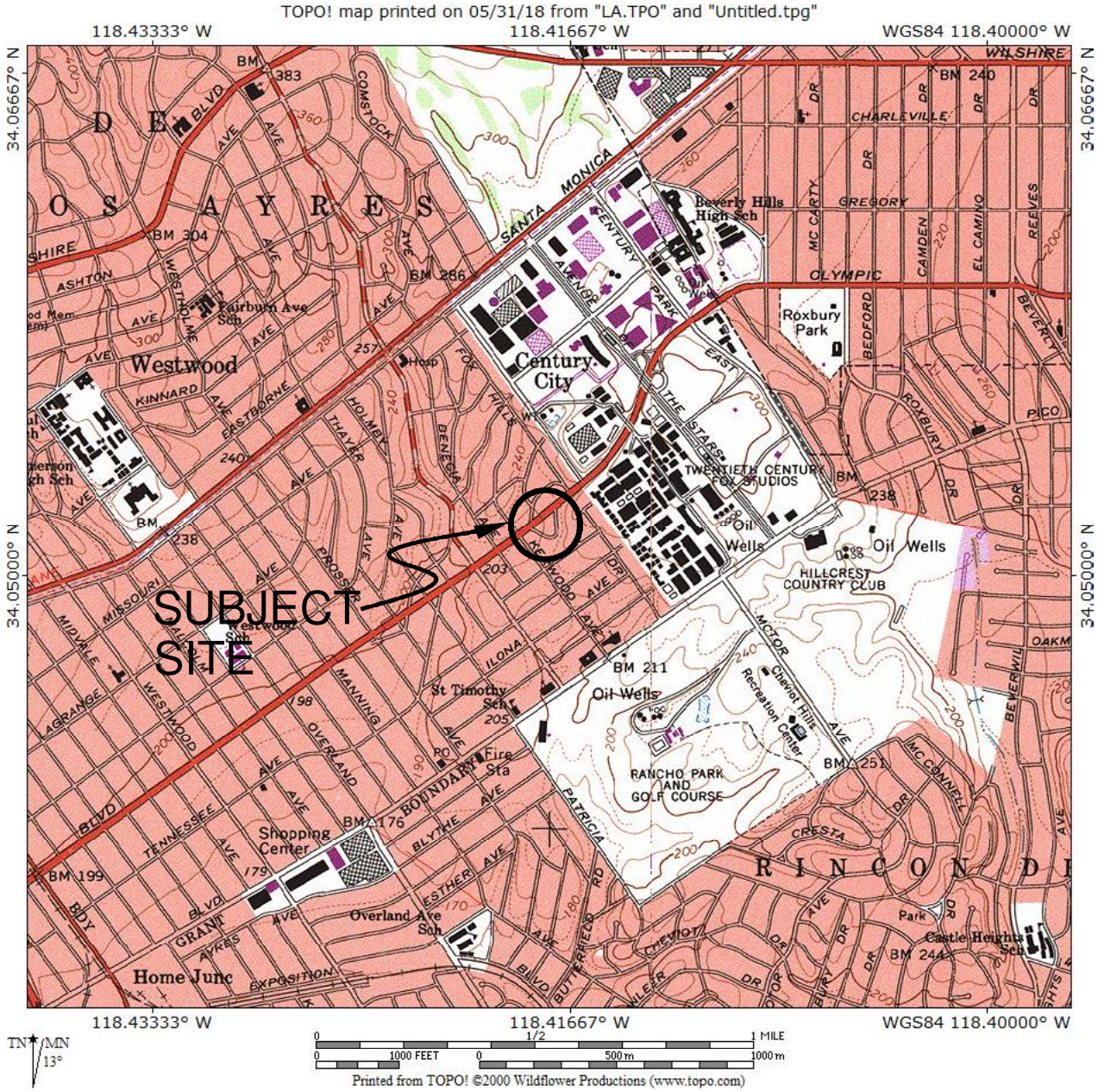

REFERENCE:U.S.G.S. TOPOGRAPHIC MAPS, 7.5 MINUTE SERIES, BEVERLY HILLS, CA QUADRANGLE

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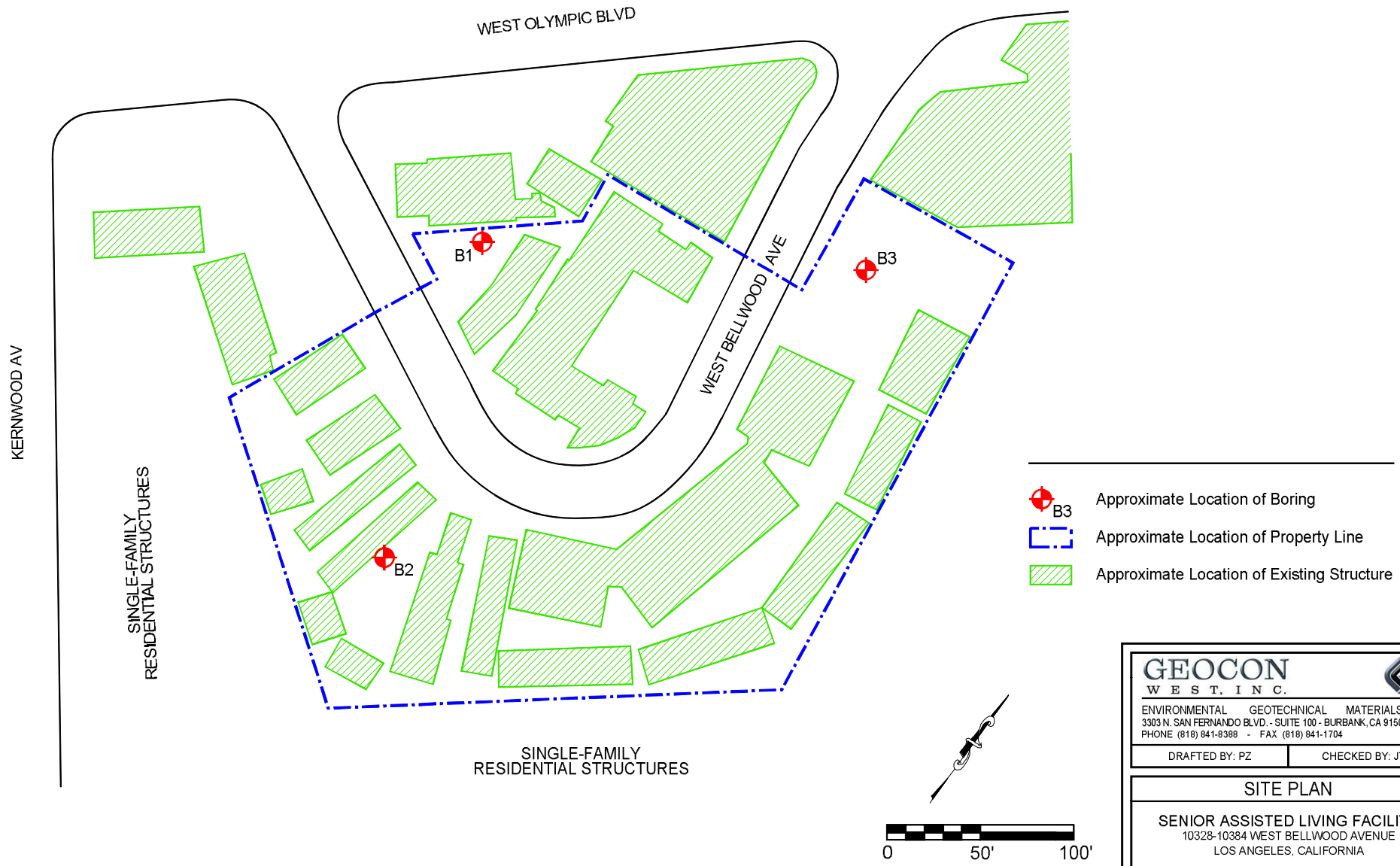
VICINITY MAP

SENIOR ASSISTED LIVING FACILITY

10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

DRAFTED BY: RA	CHECKED BY: SFK	MAY 2018	PROJECT NO. A9785-06-01	FIG. 1



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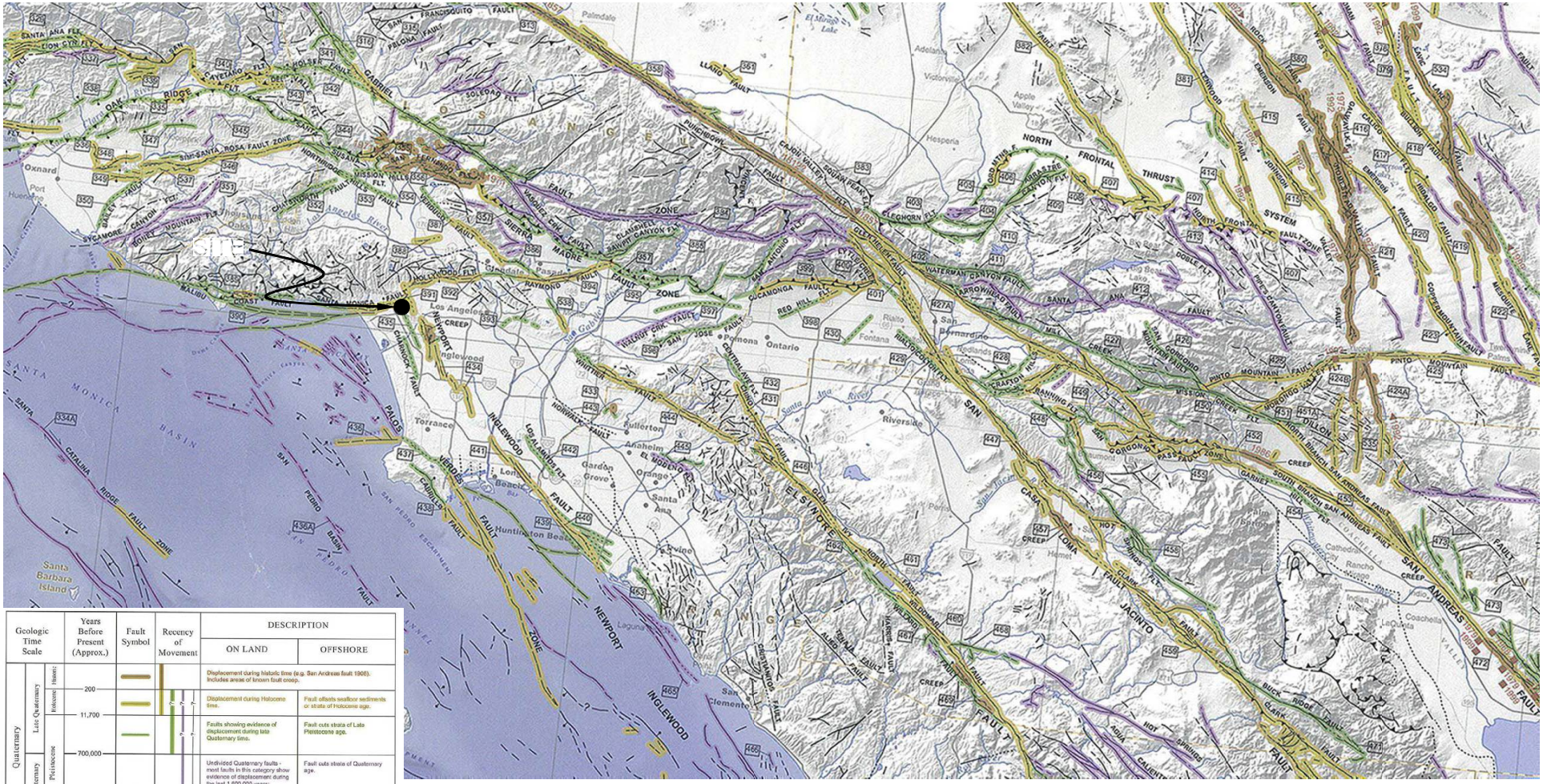
DRAFTED BY: PZ	CHECKED BY: JTA

SITE PLAN

SENIOR ASSISTED LIVING FACILITY
10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

MAY 2018	PROJECT NO. A9785-06-01	FIG. 2

Reference: Jennings, C.W. and Bryant, W. A., 2010, Fault Activity Map of California, California Geological Survey Geologic Data Map No. 6.



Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION: ON LAND	DESCRIPTION: OFFSHORE
Quaternary	Late Quaternary	Historic	200			Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
		Holocene	11,700		?	Displacement during Holocene time.	Fault offsets seafloor sediments or strata of Holocene age.
		Pleistocene	700,000		?	Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
	Early Quaternary		1,600,000*		?	Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary			4.5 billion (Age of Earth)			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.

* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.6 Ma criterion.

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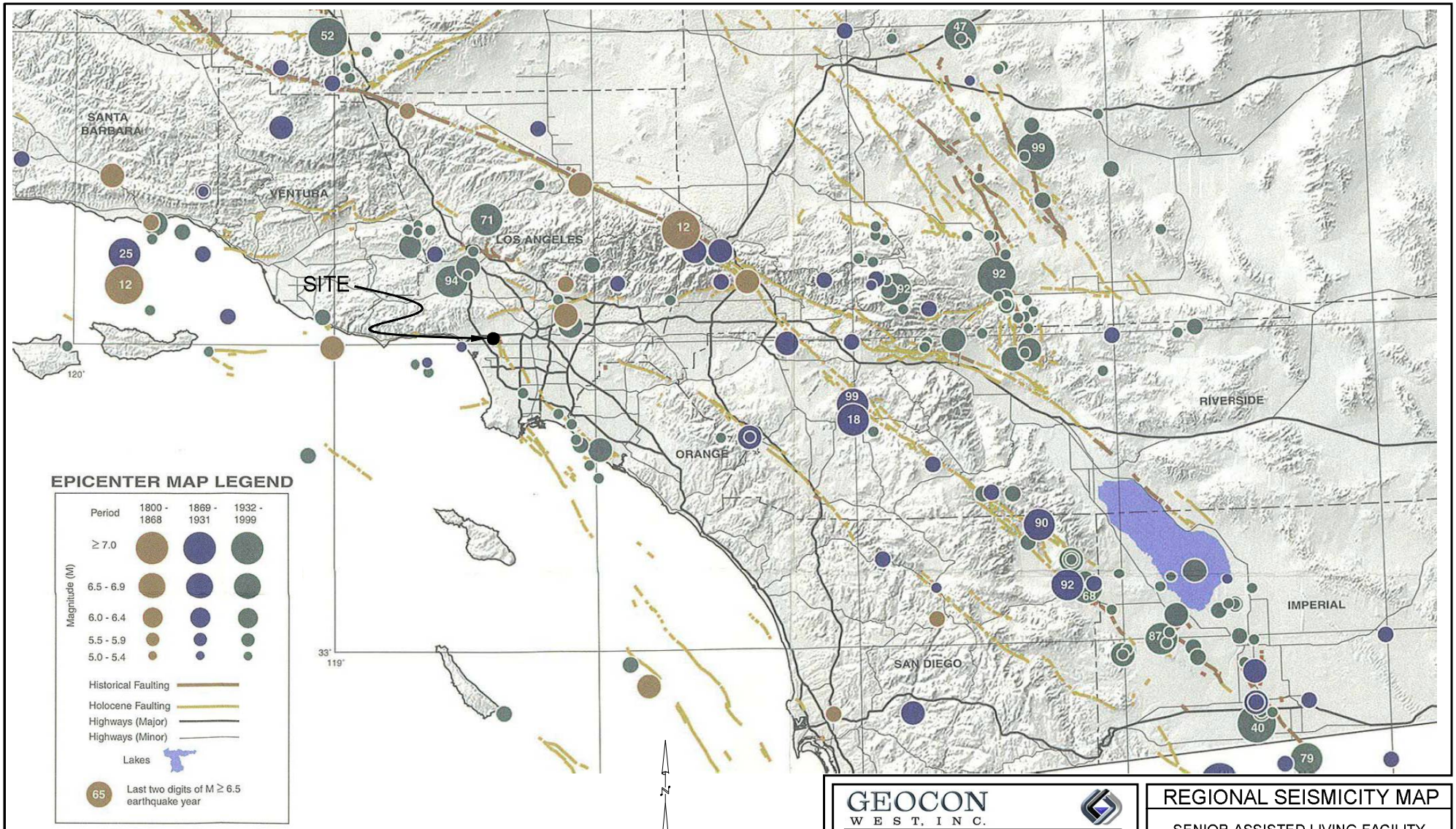
REGIONAL FAULT MAP

SENIOR ASSISTED LIVING FACILITY
10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

MAY 2018 | PROJECT NO. A9785-06-01



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REGIONAL SEISMICITY MAP

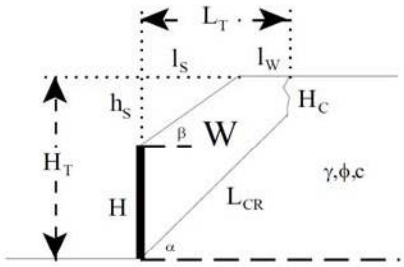
SENIOR ASSISTED LIVING FACILITY
10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

MAY 2018 | PROJECT NO. A9785-06-01 | FIG. 4

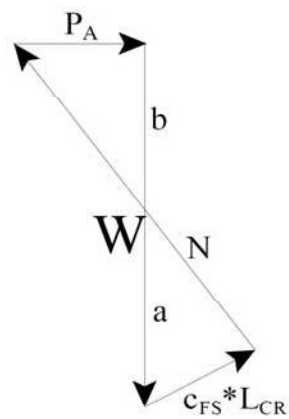
Retaining Wall Design with Transitioned Backfill
(Vector Analysis)

Input:

Retaining Wall Height	(H)	12.00	feet
Slope Angle of Backfill	(β)	0.0	degrees
Height of Slope above Wall	(h_s)	0.0	feet
Horizontal Length of Slope	(l_s)	0.0	feet
Total Height (Wall + Slope)	(H_T)	12.0	feet
Unit Weight of Retained Soils	(γ)	120.0	pcf
Friction Angle of Retained Soils	(ϕ)	25.0	degrees
Cohesion of Retained Soils	(c)	500.0	psf
Factor of Safety	(FS)	1.50	
Factored Parameters:	(ϕ_{FS})	17.3	degrees
	(c_{FS})	333.3	psf



Failure Angle (α) degrees	Height of Tension Crack (H_C) feet	Area of Wedge (A) feet^2	Weight of Wedge (W) lbs/lineal foot	Length of Failure Plane (L_{CR}) feet	a lbs/lineal foot	b lbs/lineal foot	Active Pressure (P_A) lbs/lineal foot
45	8.1	40	4754.9	5.6	3819.6	935.3	491.7
46	7.9	39	4701.2	5.7	3743.2	958.1	525.2
47	7.8	39	4629.0	5.7	3657.3	971.7	554.9
48	7.8	38	4541.3	5.7	3564.4	976.9	580.8
49	7.7	37	4440.7	5.7	3466.2	974.4	602.6
50	7.6	36	4329.3	5.7	3364.4	964.9	620.2
51	7.6	35	4208.8	5.7	3259.8	949.0	633.6
52	7.6	34	4080.7	5.6	3153.4	927.3	642.8
53	7.5	33	3946.0	5.6	3045.6	900.4	647.7
54	7.5	32	3805.7	5.5	2936.9	868.8	648.3
55	7.6	31	3660.6	5.4	2827.5	833.0	644.6
56	7.6	29	3511.2	5.3	2717.5	793.7	636.5
57	7.6	28	3358.0	5.2	2607.0	751.1	624.2
58	7.7	27	3201.5	5.1	2495.7	705.8	607.7
59	7.7	25	3041.8	5.0	2383.7	658.2	587.0
60	7.8	24	2879.2	4.8	2270.5	608.7	562.3
61	7.9	23	2713.7	4.7	2156.0	557.7	533.6
62	8.0	21	2545.4	4.5	2039.6	505.8	501.1
63	8.2	20	2374.3	4.3	1921.0	453.3	465.0
64	8.3	18	2200.1	4.1	1799.5	400.6	425.6
65	8.5	17	2022.8	3.9	1674.5	348.3	383.2
66	8.7	15	1842.1	3.6	1545.2	296.8	338.2
67	8.9	14	1657.5	3.4	1410.7	246.8	291.3
68	9.1	12	1468.7	3.1	1269.9	198.8	243.2
69	9.4	11	1275.0	2.8	1121.4	153.6	194.7
70	9.7	9	1075.8	2.4	963.8	112.0	147.2



Design Equations (Vector Analysis):

$a = c_{FS}*L_{CR}*\sin(90+\phi_{FS})/\sin(\alpha-\phi_{FS})$

$b = W-a$

$P_A = b*\tan(\alpha-\phi_{FS})$

$EFP = 2*P_A/H^2$

Maximum Active Pressure Resultant

$P_{A,\,max}$ 648.30 lbs/lineal foot

Equivalent Fluid Pressure (per lineal foot of wall)

$EFP = 2*P_A/H^2$

EFP	9.0 pcf	28.3 pcf
Design Wall for an Equivalent Fluid Pressure:	**30 pcf** Active	**50 pcf** At-Rest

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RETAINING WALL PRESSURE CALCULATION

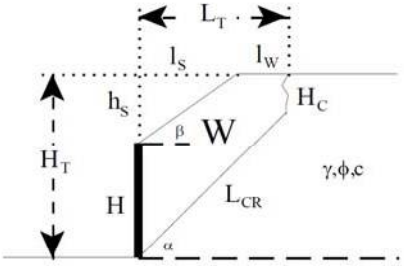
SENIOR ASSISTED LIVING FACILITY
10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

DRAFTED BY: PZ	CHECKED BY: JTA	MAY 2018	PROJECT NO. A9785-06-01	FIG. 5

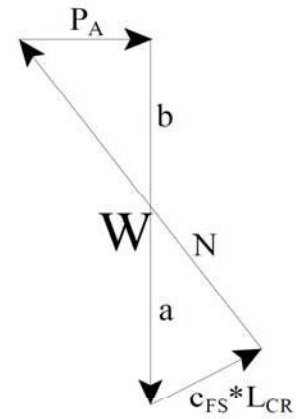
Retaining Wall Design with Transitioned Backfill
(Vector Analysis)

Input:

Retaining Wall Height	(H)	25.00	feet
Slope Angle of Backfill	(β)	0.0	degrees
Height of Slope above Wall	(h_s)	0.0	feet
Horizontal Length of Slope	(l_s)	0.0	feet
Total Height (Wall + Slope)	(H_T)	25.0	feet
Unit Weight of Retained Soils	(γ)	120.0	pcf
Friction Angle of Retained Soils	(ϕ)	33.0	degrees
Cohesion of Retained Soils	(c)	120.0	psf
Factor of Safety	(FS)	1.50	
Factored Parameters:	(ϕ_{FS})	23.4	degrees
	(c_{FS})	80.0	psf



Failure Angle (α) degrees	Height of Tension Crack (H_C) feet	Area of Wedge (A) feet^2	Weight of Wedge (W) lbs/lineal foot	Length of Failure Plane (L_{CR}) feet	a lbs/lineal foot	b lbs/lineal foot	Active Pressure (P_A) lbs/lineal foot
45	2.4	310	37198.3	32.0	6393.3	30805.0	12190.6
46	2.3	299	35937.7	31.6	6035.6	29902.2	12441.2
47	2.2	289	34716.2	31.1	5711.1	29005.1	12666.2
48	2.2	279	33531.4	30.7	5415.8	28115.5	12866.6
49	2.2	270	32381.2	30.3	5146.3	27234.9	13043.2
50	2.1	261	31263.8	29.9	4899.6	26364.2	13196.7
51	2.1	251	30177.1	29.5	4673.1	25504.0	13327.7
52	2.1	243	29119.5	29.1	4464.8	24654.7	13436.8
53	2.1	234	28089.3	28.7	4272.6	23816.6	13524.4
54	2.0	226	27084.8	28.4	4095.0	22989.7	13590.9
55	2.0	218	26104.6	28.0	3930.5	22174.1	13636.4
56	2.0	210	25147.3	27.7	3777.9	21369.5	13661.3
57	2.0	202	24211.6	27.4	3635.9	20575.7	13665.5
58	2.0	194	23296.3	27.1	3503.7	19792.6	13649.1
59	2.0	187	22400.1	26.8	3380.2	19019.9	13612.1
60	2.1	179	21522.0	26.5	3264.9	18257.1	13554.2
61	2.1	172	20660.9	26.2	3156.8	17504.1	13475.3
62	2.1	165	19815.8	26.0	3055.4	16760.4	13375.0
63	2.1	158	18985.8	25.7	2960.1	16025.7	13253.0
64	2.1	151	18170.0	25.4	2870.5	15299.5	13108.8
65	2.2	145	17367.5	25.2	2785.9	14581.6	12941.8
66	2.2	138	16577.5	24.9	2706.0	13871.5	12751.2
67	2.3	132	15799.2	24.7	2630.3	13168.9	12536.4
68	2.3	125	15031.9	24.5	2558.4	12473.5	12296.4
69	2.4	119	14274.9	24.2	2490.1	11784.8	12030.2
70	2.5	113	13527.4	24.0	2424.9	11102.5	11736.6



Design Equations (Vector Analysis):

$a = c_{FS}*L_{CR}*\sin(90+\phi_{FS})/\sin(\alpha-\phi_{FS})$

$b = W-a$

$P_A = b*\tan(\alpha-\phi_{FS})$

$EFP = 2*P_A/H^2$

Maximum Active Pressure Resultant

$P_{A,\,max}$ 13665.49 lbs/lineal foot

Equivalent Fluid Pressure (per lineal foot of wall)

$EFP = 2*P_A/H^2$

EFP	43.7 pcf	64.3 pcf
Design Wall for an Equivalent Fluid Pressure:	**44 pcf** Active	**64 pcf** At-Rest

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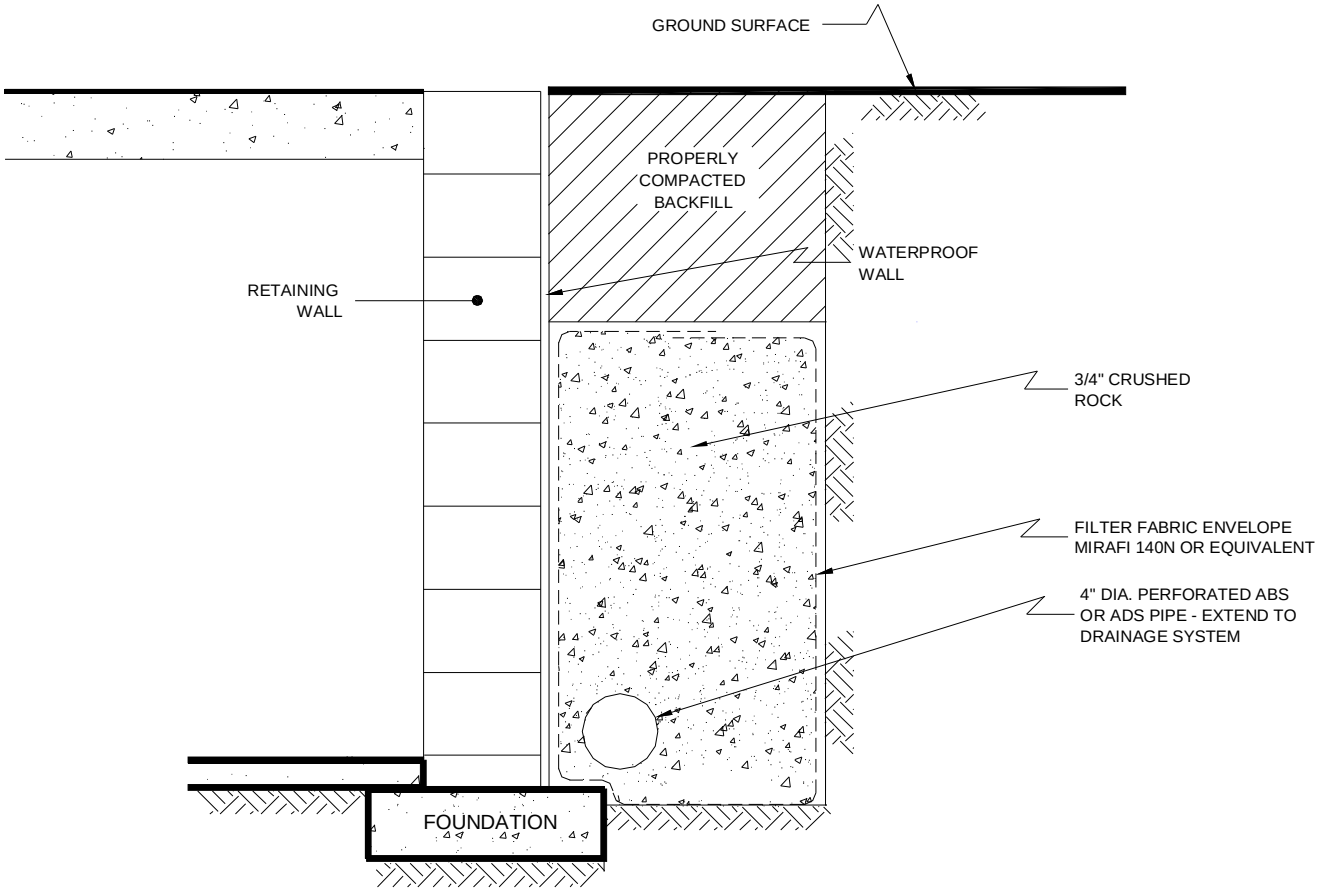
RETAINING WALL PRESSURE CALCULATION

SENIOR ASSISTED LIVING FACILITY
10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

DRAFTED BY: PZ	CHECKED BY: JTA	MAY 2018	PROJECT NO. A9785-06-01	FIG. 6



NO SCALE

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RETAINING WALL DRAIN DETAIL

SENIOR ASSISTED LIVING FACILITY

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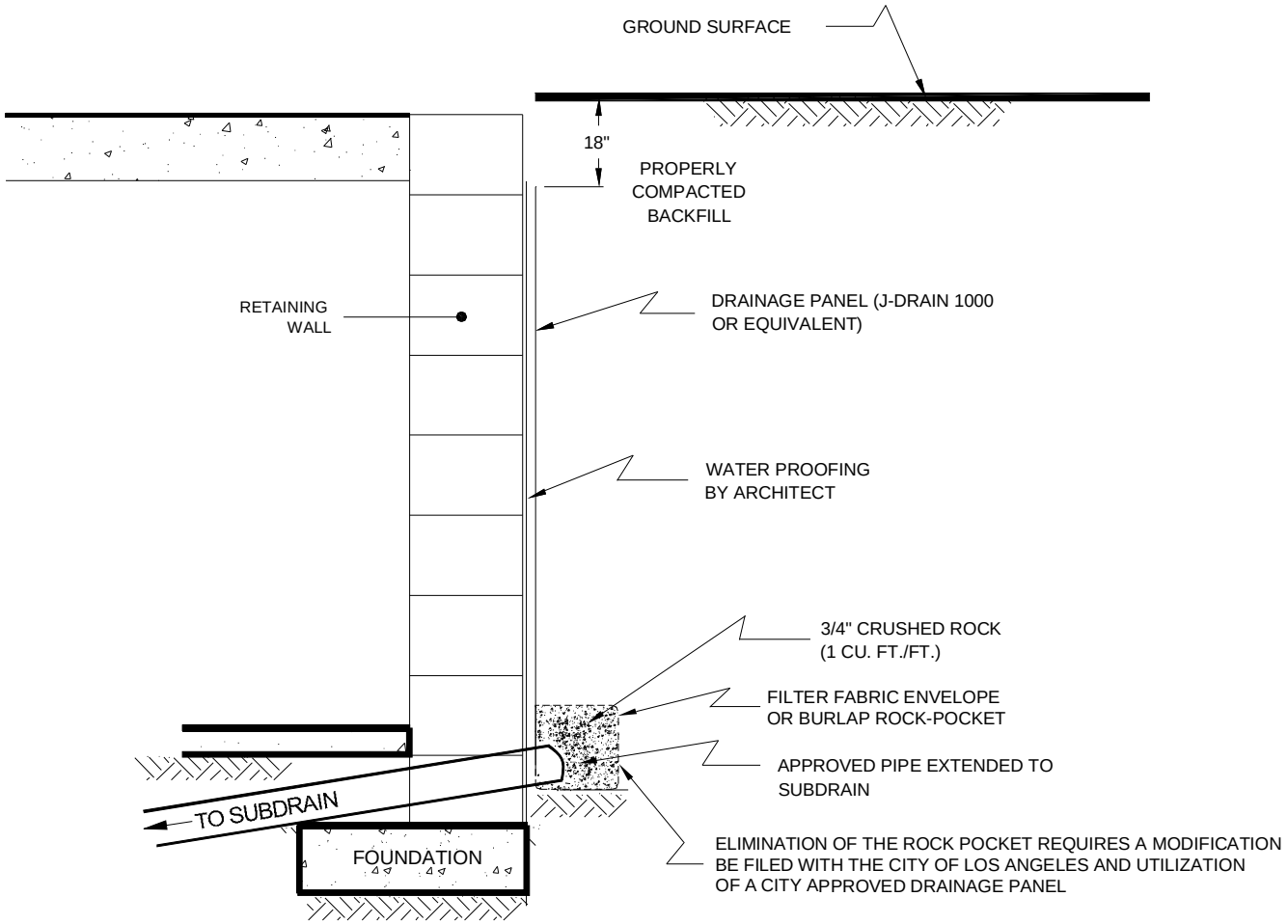
DRAFTED BY: PZ	CHECKED BY: JTA	MAY 2018	PROJECT NO. A9785-06-01	FIG. 7



NO SCALE

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RETAINING WALL DRAIN DETAIL

SENIOR ASSISTED LIVING FACILITY

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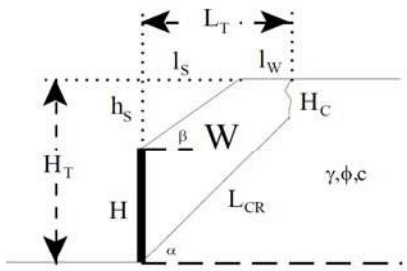
LOS ANGELES, CALIFORNIA

DRAFTED BY: PZ	CHECKED BY: JTA	MAY 2018	PROJECT NO. A9785-06-01	FIG. 8

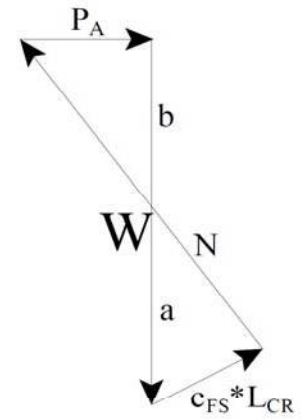
Shoring Design with Transitioned Backfill
(Vector Analysis)

Input:

Shoring Height	(H)	12.00	feet
Slope Angle of Backfill	(β)	0.0	degrees
Height of Slope above Shoring	(h_s)	0.0	feet
Horizontal Length of Slope	(l_s)	0.0	feet
Total Height (Shoring + Slope)	(H_T)	12.0	feet
Unit Weight of Retained Soils	(γ)	120.0	pcf
Friction Angle of Retained Soils	(ϕ)	25.0	degrees
Cohesion of Retained Soils	(c)	500.0	psf
Factor of Safety	(FS)	1.25	
Factored Parameters:	(ϕ_{FS})	20.5	degrees
	(c_{FS})	400.0	psf



Failure Angle (α) degrees	Height of Tension Crack (H_C) feet	Area of Wedge (A) $feet^2$	Weight of Wedge (W) lbs/lineal foot	Length of Failure Plane (L_{CR}) feet	a lbs/lineal foot	b lbs/lineal foot	Active Pressure (P_A) lbs/lineal foot
45	10.6	16	1870.2	1.9	1756.5	113.7	51.9
46	10.4	17	2057.9	2.2	1912.7	145.2	69.4
47	10.2	18	2194.4	2.4	2020.7	173.7	86.8
48	10.1	19	2288.2	2.6	2089.8	198.4	103.4
49	10.0	20	2345.9	2.7	2127.4	218.5	118.9
50	9.9	20	2373.2	2.8	2139.2	234.0	132.6
51	9.8	20	2374.5	2.9	2129.8	244.7	144.4
52	9.7	20	2353.6	2.9	2102.8	250.8	153.9
53	9.6	19	2313.6	3.0	2061.2	252.4	161.1
54	9.6	19	2256.9	3.0	2007.1	249.8	165.6
55	9.6	18	2185.7	2.9	1942.3	243.4	167.6
56	9.6	18	2101.7	2.9	1868.1	233.5	166.8
57	9.6	17	2006.3	2.8	1785.7	220.6	163.5
58	9.7	16	1900.6	2.8	1695.7	205.0	157.5
59	9.7	15	1785.7	2.7	1598.6	187.1	149.1
60	9.8	14	1662.2	2.5	1494.7	167.5	138.3
61	9.9	13	1530.6	2.4	1384.0	146.6	125.4
62	10.0	12	1391.5	2.2	1266.5	124.9	110.7
63	10.2	10	1244.9	2.1	1141.9	103.0	94.5
64	10.3	9	1091.2	1.9	1009.7	81.4	77.4
65	10.5	8	930.2	1.6	869.3	60.8	59.9
66	10.8	6	761.7	1.4	719.8	41.9	42.7
67	11.0	5	585.5	1.1	560.1	25.4	26.8
68	11.3	3	401.1	0.8	388.9	12.2	13.3
69	11.6	2	207.8	0.4	204.4	3.4	3.8
70	12.0	0	4.7	0.0	4.7	0.0	0.0



Design Equations (Vector Analysis):

$a = c_{FS}*L_{CR}*\sin(90+\phi_{FS})/\sin(\alpha-\phi_{FS})$

$b = W-a$

$P_A = b*\tan(\alpha-\phi_{FS})$

$EFP = 2*P_A/H^2$

Maximum Active Pressure Resultant

$P_{A,\,max}$ 167.57 lbs/lineal foot

Equivalent Fluid Pressure (per lineal foot of shoring)

$EFP = 2*P_A/H^2$

EFP	2.3 pcf	22.5 pcf
Design Shoring for an Equivalent Fluid Pressure:	**25 pcf** Active	**45 pcf** At-Rest

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SHORING PRESSURE CALCULATION

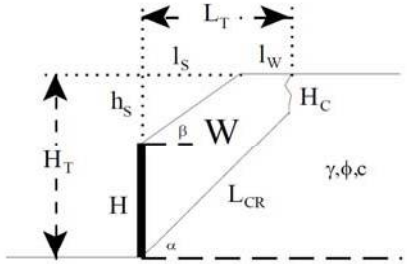
SENIOR ASSISTED LIVING FACILITY
10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

DRAFTED BY: PZ	CHECKED BY: JTA	MAY 2018	PROJECT NO. A9785-06-01	FIG. 9

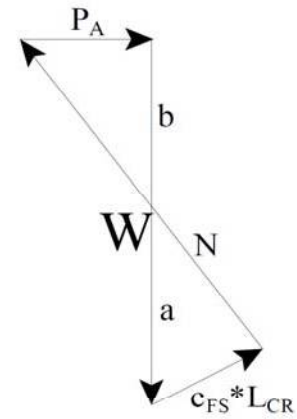
Shoring Design with Transitioned Backfill
(Vector Analysis)

Input:

Shoring Height	(H)	25.00	feet
Slope Angle of Backfill	(β)	0.0	degrees
Height of Slope above Shoring	(h_s)	0.0	feet
Horizontal Length of Slope	(l_s)	0.0	feet
Total Height (Shoring + Slope)	(H_T)	25.0	feet
Unit Weight of Retained Soils	(γ)	120.0	pcf
Friction Angle of Retained Soils	(ϕ)	33.0	degrees
Cohesion of Retained Soils	(c)	120.0	psf
Factor of Safety	(FS)	1.25	
Factored Parameters:	(ϕ_{FS})	27.5	degrees
	(c_{FS})	96.0	psf



Failure Angle (α) degrees	Height of Tension Crack (H_C) feet	Area of Wedge (A) $feet^2$	Weight of Wedge (W) lbs/lineal foot	Length of Failure Plane (L_{CR}) feet	a lbs/lineal foot	b lbs/lineal foot	Active Pressure (P_A) lbs/lineal foot
45	3.3	307	36864.7	30.7	8663.4	28201.2	8917.2
46	3.2	297	35644.2	30.3	8115.4	27528.8	9236.1
47	3.1	287	34455.7	29.9	7624.0	26831.8	9526.4
48	3.0	277	33298.5	29.6	7181.3	26117.2	9789.2
49	2.9	268	32171.6	29.2	6781.2	25390.4	10025.6
50	2.9	259	31073.7	28.9	6418.1	24655.6	10236.4
51	2.8	250	30003.8	28.5	6087.7	23916.1	10422.3
52	2.8	241	28960.5	28.2	5785.9	23174.6	10584.2
53	2.7	233	27942.6	27.9	5509.6	22433.0	10722.6
54	2.7	225	26948.8	27.6	5255.8	21693.0	10837.9
55	2.7	216	25977.9	27.3	5022.2	20955.7	10930.7
56	2.7	209	25028.7	27.0	4806.6	20222.1	11001.2
57	2.6	201	24100.0	26.7	4607.1	19492.9	11049.7
58	2.6	193	23190.9	26.4	4422.2	18768.7	11076.3
59	2.6	186	22300.1	26.1	4250.4	18049.7	11081.2
60	2.6	179	21426.7	25.8	4090.4	17336.3	11064.4
61	2.6	171	20569.7	25.6	3941.1	16628.6	11025.8
62	2.7	164	19728.2	25.3	3801.5	15926.7	10965.4
63	2.7	158	18901.3	25.1	3670.7	15230.6	10882.7
64	2.7	151	18088.2	24.8	3547.9	14540.2	10777.7
65	2.8	144	17288.0	24.6	3432.4	13855.5	10649.8
66	2.8	137	16499.9	24.3	3323.5	13176.4	10498.6
67	2.9	131	15723.2	24.1	3220.5	12502.7	10323.6
68	2.9	125	14957.1	23.8	3122.8	11834.3	10124.2
69	3.0	118	14201.0	23.6	3030.0	11170.9	9899.5
70	3.1	112	13454.0	23.3	2941.5	10512.5	9648.8



Design Equations (Vector Analysis):

$a = c_{FS}*L_{CR}*\sin(90+\phi_{FS})/\sin(\alpha-\phi_{FS})$

$b = W-a$

$P_A = b*\tan(\alpha-\phi_{FS})$

$EFP = 2*P_A/H^2$

Maximum Active Pressure Resultant

$P_{A,\,max}$ 11081.23 lbs/lineal foot

Equivalent Fluid Pressure (per lineal foot of shoring)

$EFP = 2*P_A/H^2$

EFP	35.5 pcf	55.8 pcf
Design Shoring for an Equivalent Fluid Pressure:	**36 pcf** Active	**59 pcf** At-Rest

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SHORING PRESSURE CALCULATION

SENIOR ASSISTED LIVING FACILITY
10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

DRAFTED BY: PZ	CHECKED BY: JTA	MAY 2018	PROJECT NO. A9785-06-01	FIG. 10

BORING PERCOLATION TEST FIELD LOG

Date:	5/8/2018	**Boring/Test Number:**	B1	
Project Number:	A9785-06-01	**Diameter of Boring:**	8	inches
Project Location:	Bellwood Avenue	**Diameter of Casing:**	2	inches
Earth Description:	SP	**Depth of Boring:**	30.5	feet
Tested By:	RMA	**Depth to Invert of BMP:**	20	feet
Liquid Description:	Clear Clean Tap Water	**Depth to Water Table:**	>40	feet
Measurement Method:	Sounder	**Depth to Initial Water Depth (d_1):**	240	inches
Start Time for Pre-Soak:	8:15 AM	**Water Remaining in Boring (Y/N):**	Yes	
Start Time for Standard:	9:15 AM	**Standard Time Interval Between Readings:**	30 min	

Reading Number	Time Start (hh:mm)	Time End (hh:mm)	Elapsed Time Δtime (min)	Water Drop During Standard Time Interval, Δd (in)	Soil Description Notes Comments
1	9:20 AM	9:50 AM	30	82.2	
2	9:54 AM	10:24 AM	30	81.0	
3	10:30 AM	11:00 AM	30	81.0	
4	11:05 AM	11:35 AM	30	80.8	
5	11:38 AM	12:08 PM	30	80.3	
6	12:10 PM	12:40 PM	30	80.4	Stabilized Readings
7	12:43 PM	1:13 PM	30	81.5	Achieved
8	1:15 PM	1:45 PM	30	81.6	

MEASURED PERCOLATION RATE & DESIGN INFILTRATION RATE CALCULATIONS*

* Calculations Below Based on Stabilized Readings Only

Boring Radius, r: 4 inches

Test Section Height, h: 126.0 inches

$$Test\ Section\ Surface\ Area, A = 2\pi rh + \pi r^2$$

A = **3217** in^2

$$Discharged\ Water\ Volume, V = \pi r^2 \Delta d$$

$$Percolation\ Rate = \left(\frac{V/A}{\Delta T}\right)$$

Reading 6	V =	**4041**	in^3	Percolation Rate =	**2.51**	inches/hour
Reading 7	V =	**4096**	in^3	Percolation Rate =	**2.55**	inches/hour
Reading 8	V =	**4102**	in^3	Percolation Rate =	**2.55**	inches/hour

Measured Percolation Rate = **2.54** inches/hour

Reduction Factors

Boring Percolation Test, RF_t = 2

Site Variability, RF_v = 1

Long Term Siltation, RF_s = 1

$$Total\ Reduction\ Factor, RF = RF_t \times RF_v \times RF_s$$

Total Reduction Factor = 2

Design Infiltration Rate

$$Design\ Infiltration\ Rate = Measured\ Percolation\ Rate\ /RF$$

Design Infiltration Rate = **1.27** inches/hour

FIGURE 11

APPENDIX A

APPENDI□ A

FIELD INVESTIGATION

The site was explored on May 7, 2018, by excavating two 8-inch diameter borings to depths of approximately 30½ to 40½ feet below the existing ground surface utilizing a limited-access drilling machine. Representative and relatively undisturbed samples were obtained by driving a 3-inch, O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a 140-pound auto-hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2 3/8-inch diameter brass sampler rings to facilitate soil removal and testing. Bulk samples were also obtained.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). Logs of the borings are presented on Figures A1 through A3. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the boring logs were revised based on subsequent laboratory testing. The approximate locations of the exploratory borings are depicted on the Site Plan (see Figure 2).

PROJECT NO. A9785-06-01

BORING 1

ELEV. (MSL.) - - DATE COMPLETED 5/7/18

EQUIPMENT LIMITED ACCESS RIG BY: RMA

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ARTIFICIAL FILL** Silty Sand, medium dense, slightly moist, dry, brown, trace fine gravel.			
2								
4								
6	B1@5'				- no recovery	25		
8								
10	B1@10'				- asphalt chunks	17	98.7	7.1
12	BULK 10-15' B1@12'				**ALLUVIUM** Sand with Silt, poorly graded, medium dense, slightly moist, yellowish brown, fine-grained.	20	115.2	12.6
14								
16	B1@15'			SP-SM		27	117.9	15.0
18	B1@18'					25	117.4	7.9
20	B1@20'				Sand, well graded, very dense, slightly moist, light brown, trace gravel and cobbles (to 6"). - trace clay	25	106.7	20.2
22	B1@22'			SW		50 (4")	122.2	4.6
24								
26	B1@25'					50 (6")	121.6	3.8
	B1@27'			SP	Sand, poorly graded, medium dense, slightly moist, dark yellowish brown, fine- to medium-grained, trace coarse-grained.	49	116.1	
28				SW	Sand, well graded, very dense, slightly moist, dark yellowish brown, cobbles (to 4").			

A9785-06-01 BORING LOGS.GPJ

Figure A1,
Log of Boring 1, Page 1 of 2

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9785-06-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1** ELEV. (MSL.) - - DATE COMPLETED 5/7/18 EQUIPMENT LIMITED ACCESS RIG BY: RMA	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
30	B1@30'			SW		50 (5")	118.2	8.2
					Total depth of boring: 30.5 feet Fill to 10.7 feet. No groundwater encountered. Percolation pipe installed.			

Figure A1,
Log of Boring 1, Page 2 of 2

A9785-06-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9785-06-01

BORING 2

ELEV. (MSL.) - - DATE COMPLETED 5/7/18

EQUIPMENT LIMITED ACCESS RIG BY: RMA

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ARTIFICIAL FILL** Sand with Silt, poorly graded, loose, slightly moist, light brown.			
2								
4					**ALLUVIUM** Sand, poorly graded, medium dense, slightly moist, light yellowish brown, fine-grained, trace silt.			
6	B2@5					36	111.1	15.2
8				SP				
10	B2@10				- increase in silt	29	102.8	13.7
12					Sandy Silt, hard, slightly moist, dark yellowish brown, fine-grained.			
14								
16	B2@15					73	113.1	14.0
18				ML				
20	B2@20				- stiff	40	102.9	20.6
22	B2@22				- trace clay	40	110.2	20.4
24								
26	B2@25				- increase in fine-grained sand	58	116.2	10.4
28	B2@27					57	116.1	7.1
				SP	Sand, poorly graded, very dense, slightly moist, yellowish brown.			

Figure A2,
Log of Boring 2, Page 1 of 2

A9785-06-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9785-06-01

BORING 2

ELEV. (MSL.) - - DATE COMPLETED 5/7/18

EQUIPMENT LIMITED ACCESS RIG BY: RMA

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B2@30			SP		50 (4")	96.7	7.4
32	B2@32				- no silt, friable	50 (4")	101.0	6.3
34								
	B2@35					50 (6")	92.8	6.9
36								
38								
40	B2@40					50 (4")	96.2	5.9

Total depth of boring: 40.5 feet
Fill to 4 feet.
No groundwater encountered.
Backfilled with cuttings and tamped.

Figure A2,
Log of Boring 2, Page 2 of 2

A9785-06-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9785-06-01

BORING 3

ELEV. (MSL.) - - DATE COMPLETED 5/7/18

EQUIPMENT LIMITED ACCESS RIG BY: RMA

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ARTIFICIAL FILL** Silty Sand, loose, slightly moist, light yellowish brown, fine-grained.			
2								
4					**ALLUVIUM** Sandy Silt, stiff, slightly moist, dark yellowish brown, fine-grained. - some gravel, few cobbles (to 5")			
6	B3@5'			ML		42	115.3	15.6
8					Sand, well graded, very dense, dark yellowish brown, some silt.			
10	B3@10'			SW		50 (6")		
12	B3@12'				Sand, poorly graded, very dense, slighlty moist, light brown, fine-grained, friable.	50 (6")	99.6	2.7
14								
16	B3@15'				- some fine gravel	65	110.4	3.5
18	B3@18'					50 (3")	104.3	5.1
20	B3@20'			SP		50 (5")	99.6	5.7
22	B3@22'					50 (5")	93.9	7.7
24								
26	B3@25'				- moderately oxidized	50 (3")	100.2	6.0
28	B3@27'					50 (4")	93.0	10.9

Figure A3,
Log of Boring 3, Page 1 of 2

A9785-06-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

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PROJECT NO. A9785-06-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 3** ELEV. (MSL.) - - DATE COMPLETED **5/7/18** EQUIPMENT **LIMITED ACCESS RIG** BY: **RMA**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
30	B3@30'			SP		50 (2.5")	98.8	9.8
					Total depth of boring: 30.5 feet Fill to 4 feet. No groundwater encountered. Backfilled with cuttingsa nd tamped. Asphalt patched.			

Figure A3,
Log of Boring 3, Page 2 of 2

A9785-06-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

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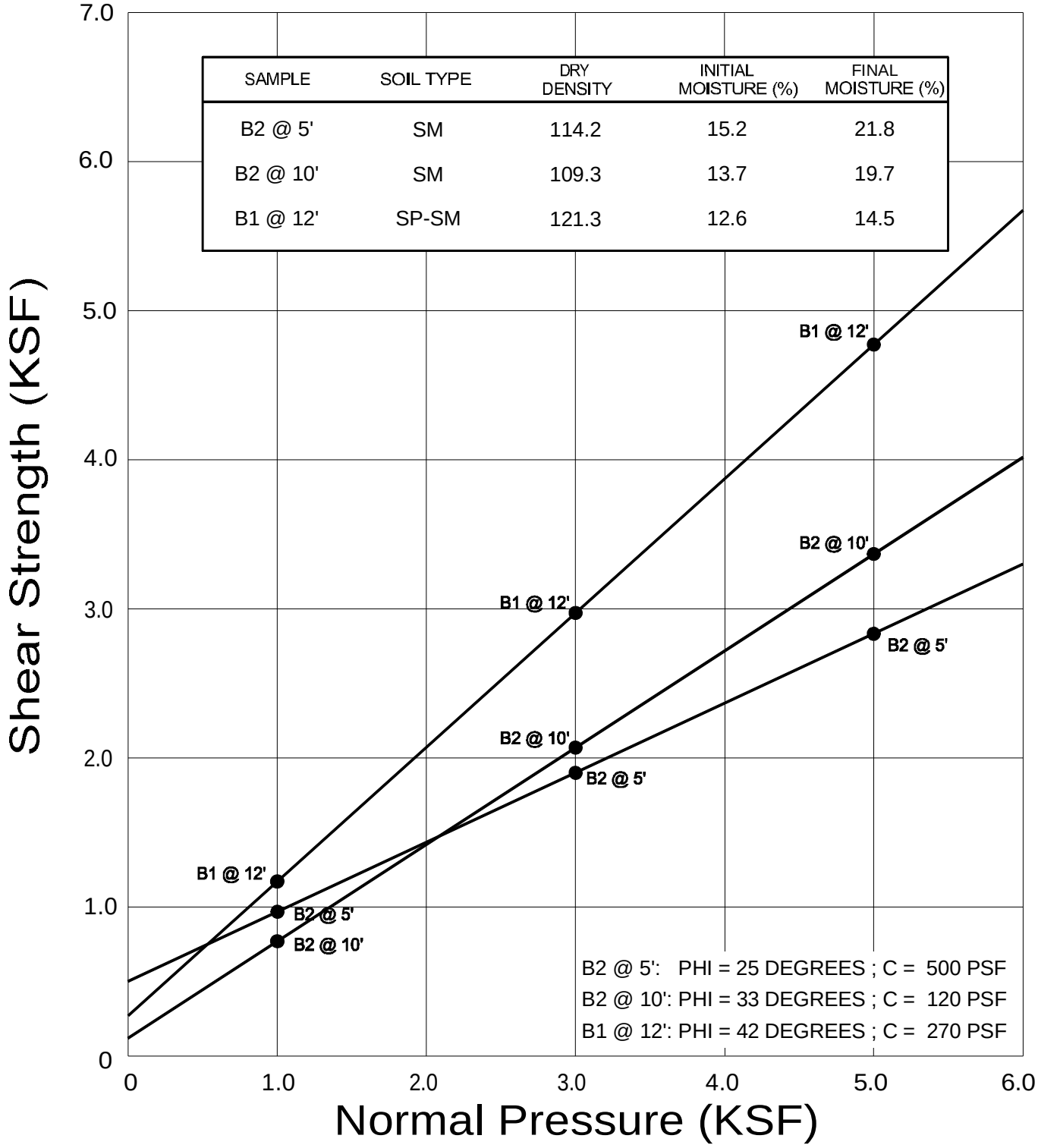
APPENDIX B

APPENDI B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the "American Society for Testing and Materials (ASTM)", or other suggested procedures. Selected samples were tested for direct shear strength, consolidation and expansion characteristics, corrosivity, in-place dry density and moisture content. The results of the laboratory tests are summarized in Figures B1 through B7. The in-place dry density and moisture content of the samples tested are presented on the boring logs, Appendix A.



SAMPLE	SOIL TYPE	DRY DENSITY	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2 @ 5'	SM	114.2	15.2	21.8
B2 @ 10'	SM	109.3	13.7	19.7
B1 @ 12'	SP-SM	121.3	12.6	14.5

● Direct Shear, Saturated

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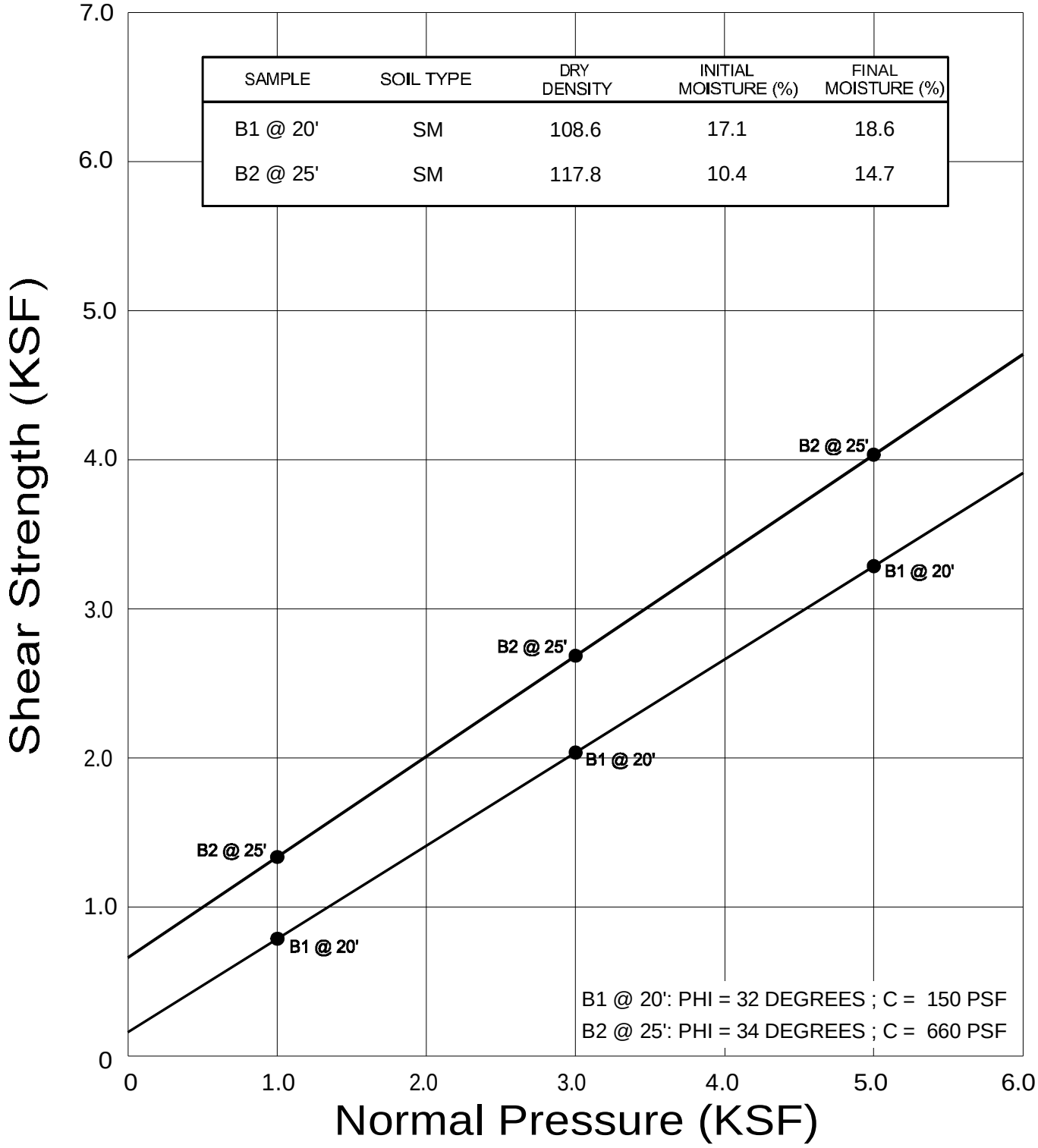
PHONE (818) 841-8388 - FAX (818) 841-1704

DIRECT SHEAR TEST RESULTS

SENIOR ASSISTED LIVING FACILITY

10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

DRAFTED BY: PZ	CHECKED BY: JTA	MAY 2018	PROJECT NO. A9785-06-01	FIG. B1



SAMPLE	SOIL TYPE	DRY DENSITY	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1 @ 20'	SM	108.6	17.1	18.6
B2 @ 25'	SM	117.8	10.4	14.7

● Direct Shear, Saturated

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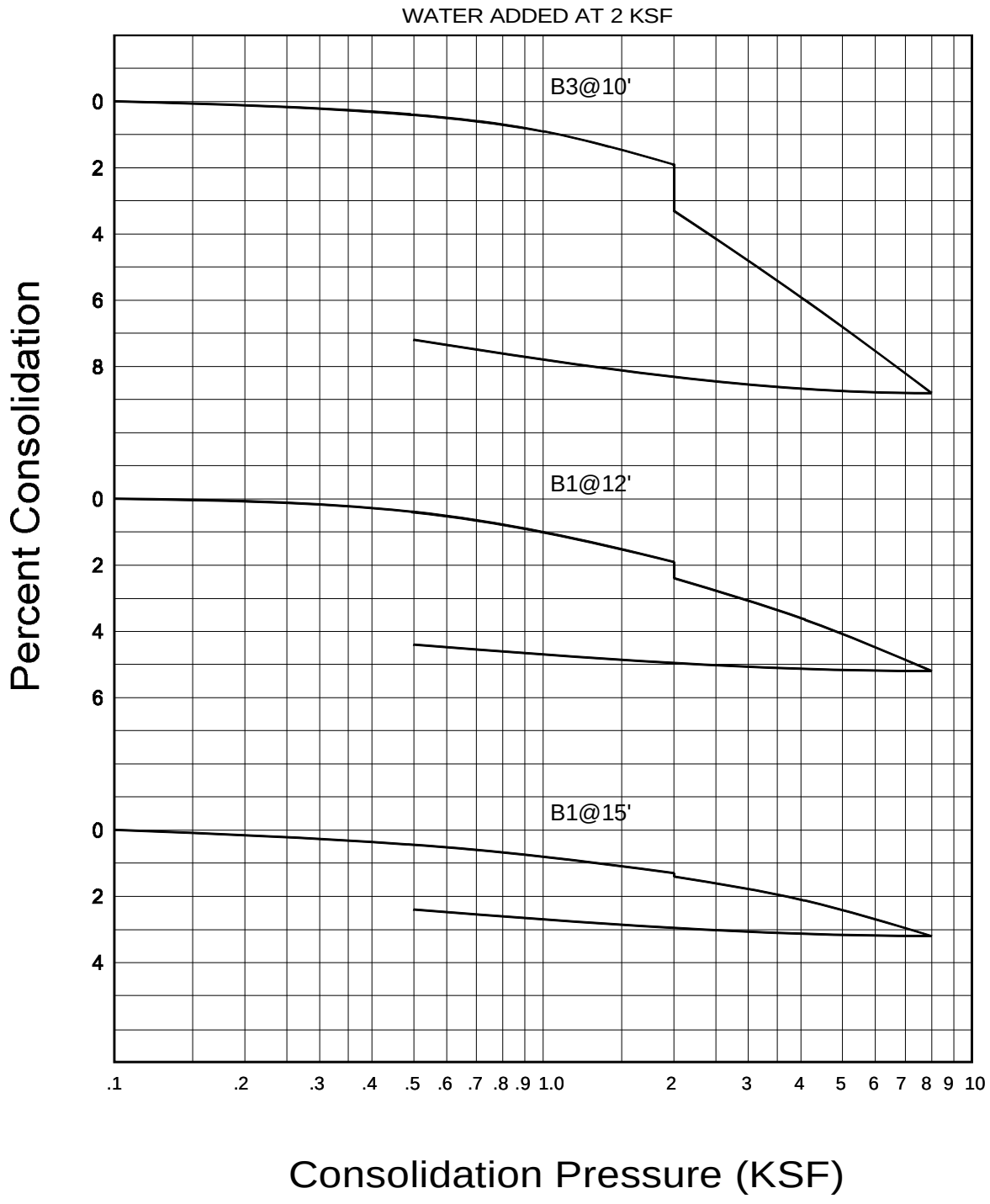
DIRECT SHEAR TEST RESULTS

SENIOR ASSISTED LIVING FACILITY

10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

DRAFTED BY: PZ	CHECKED BY: JTA	MAY 2018	PROJECT NO. A9785-06-01	FIG. B2



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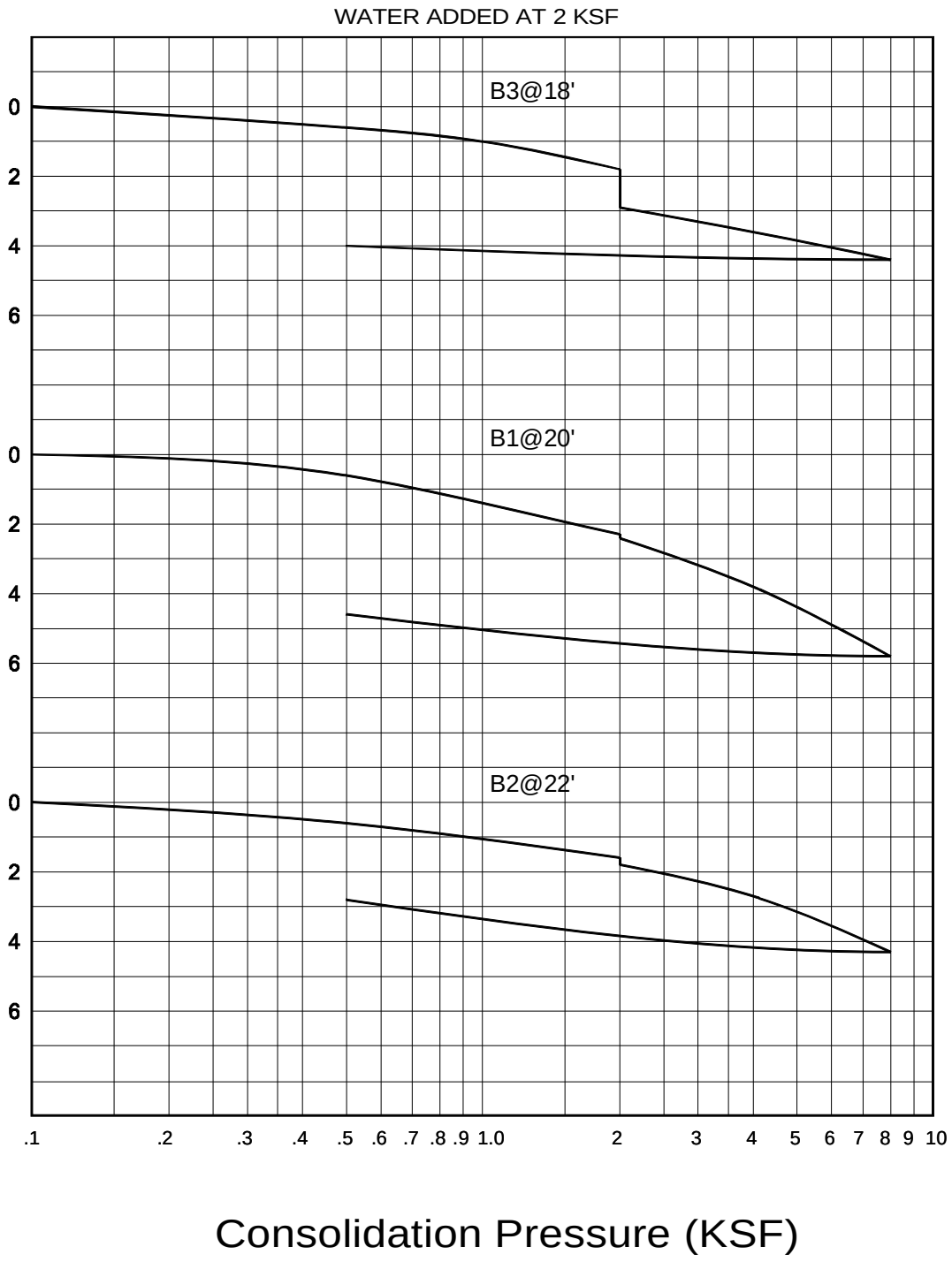
CONSOLIDATION TEST RESULTS

SENIOR ASSISTED LIVING FACILITY

10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

DRAFTED BY: PZ	CHECKED BY: JTA	MAY 2018	PROJECT NO. A9785-06-01	FIG. B3



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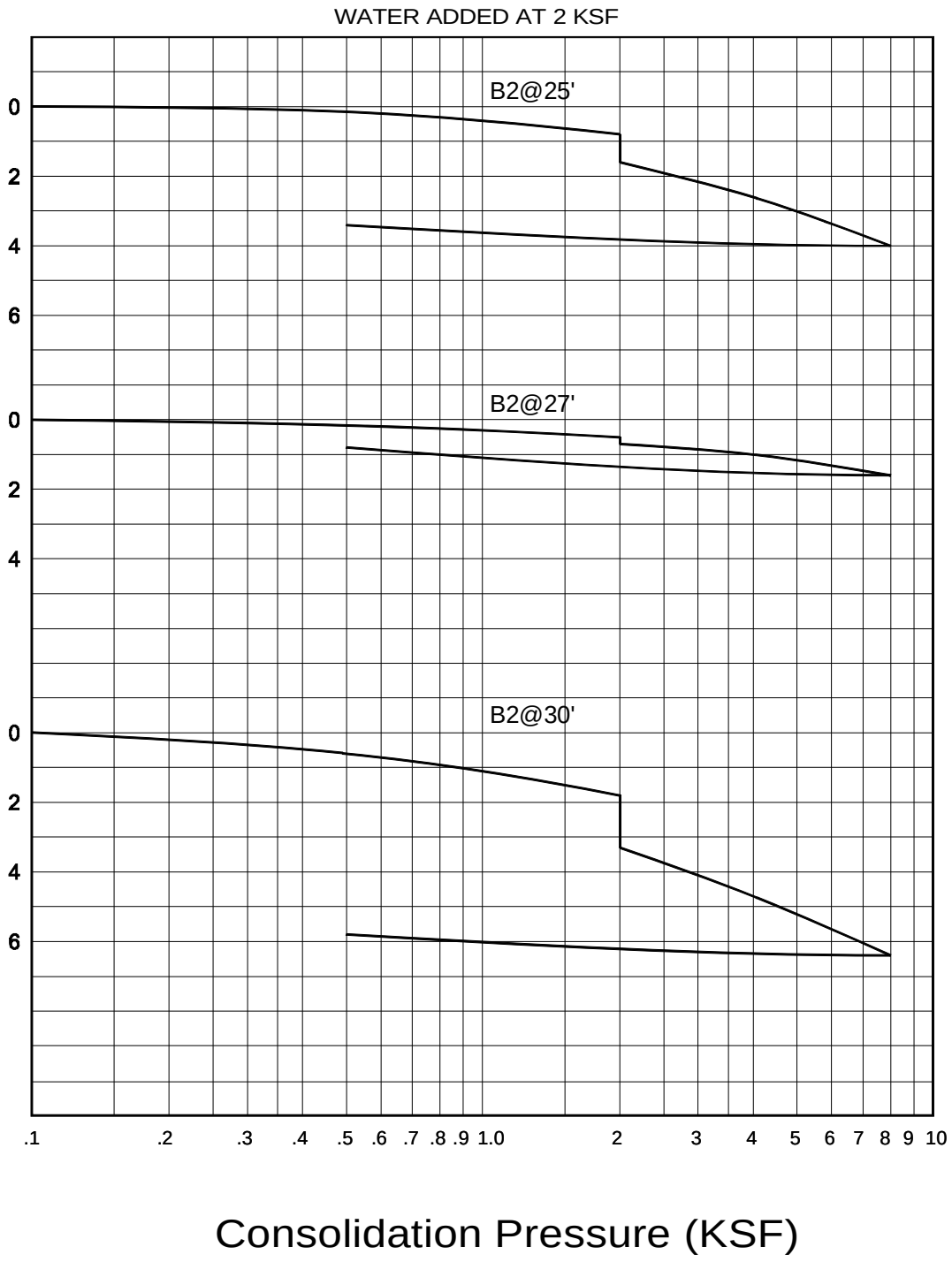
CONSOLIDATION TEST RESULTS

SENIOR ASSISTED LIVING FACILITY

10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

DRAFTED BY: PZ	CHECKED BY: JTA	MAY 2018	PROJECT NO. A9785-06-01	FIG. B4



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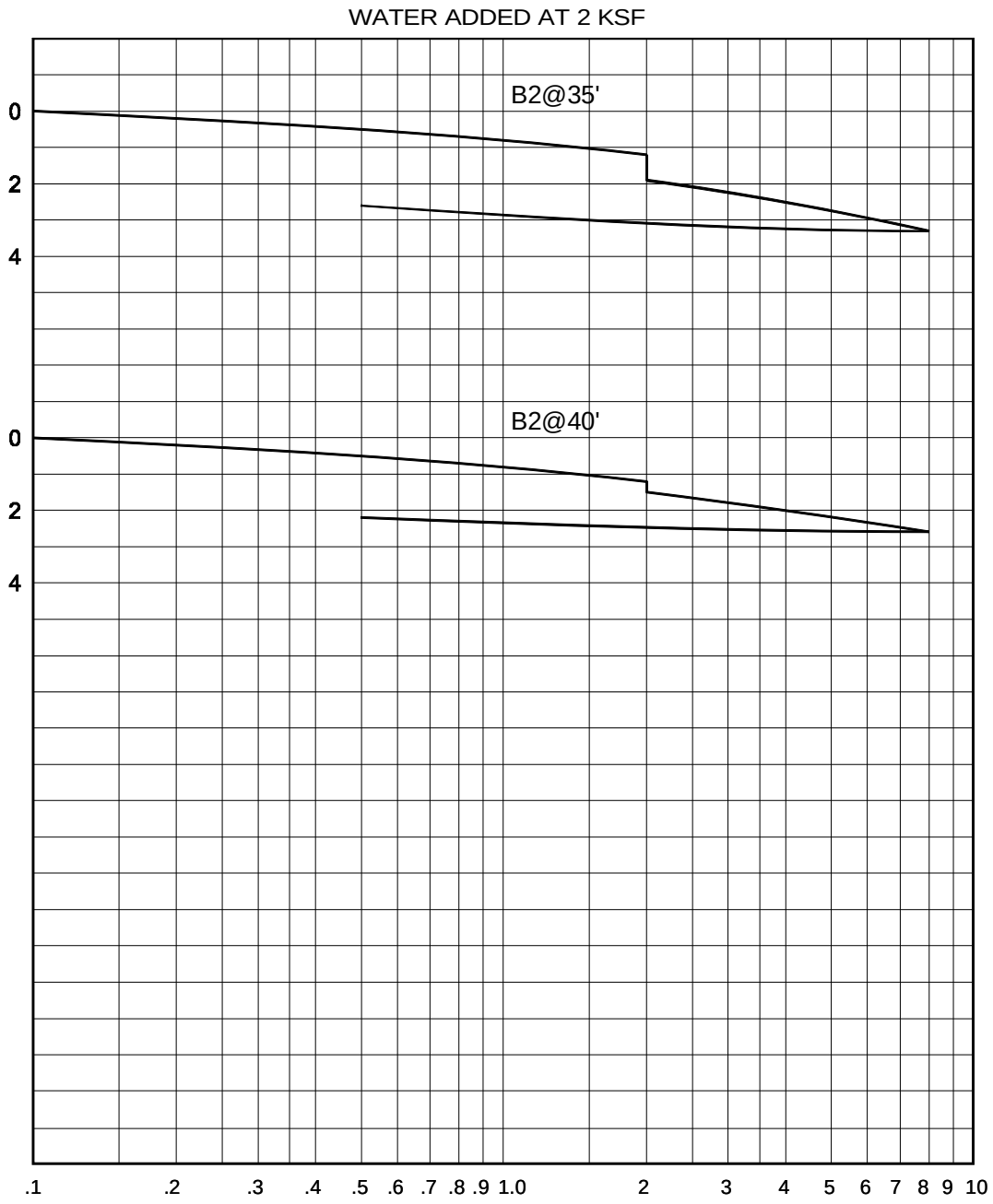
CONSOLIDATION TEST RESULTS

SENIOR ASSISTED LIVING FACILITY

10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

DRAFTED BY: PZ	CHECKED BY: JTA	MAY 2018	PROJECT NO. A9785-06-01	FIG. B5



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CONSOLIDATION TEST RESULTS

SENIOR ASSISTED LIVING FACILITY

10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

DRAFTED BY: PZ	CHECKED BY: JTA	MAY 2018	PROJECT NO. A9785-06-01	FIG. B6

SUMMARY OF LABORATORY POTENTIAL OF HYDROGEN (pH) AND RESISTIVITY TEST RESULTS CALIFORNIA TEST NO. 643

Sample No.	pH	Resistivity (ohm centimeters)
B1 @ 10-15'	7.86	2700 (Corrosive)
B1 @ 20-25'	7.52	2200 (Corrosive)

SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS EPA NO. 325.3

Sample No.	Chloride Ion Content (%)
B1 @ 10-15'	0.007
B1 @ 20-25'	0.013

SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS CALIFORNIA TEST NO. 417

Sample No.	Water Soluble Sulfate (% SO_4)	Sulfate Exposure*
B1 @ 10-15'	0.001	Negligible
B1 @ 20-25'	0.001	Negligible

* Reference: 2016 California Building Code, Section 1904.3 and ACI 318-11 Section 4.3.

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CORROSIVITY TEST RESULTS

SENIOR ASSISTED LIVING FACILITY
10328-10384 WEST BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

DRAFTED BY: PZ	CHECKED BY: JTA	MAY 2018	PROJECT NO. A9785-06-01	FIG. B7

Appendix IS-5

Phase I ESA and Phase II ESA

CONVERSE CONSULTANTS

Phase I Environmental Site Assessment Report

10330, 10340, 10341, 10344, 10360, and 10368-10384 1/2 Bellwood Avenue
Los Angeles, California

Converse Project No. 18-41-139-01
May 15, 2018

Prepared For:

SBLP Century City, LLC
4514 Cole Avenue
Suite 1500
Dallas, Texas 75205

Prepared By:

Converse Consultants
717 S. Myrtle Avenue
Monrovia, CA 91016

Converse Consultants
Geotechnical Engineering, Environmental and Groundwater Science, Inspection and Testing Services

May 15, 2018

Mr. Patrick McGonigle
SBLP Century City, LLC
4514 Cole Avenue
Suite 1500
Dallas, Texas 75205

Subject: PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT
10330, 10340, 10341, 10344, 10360, and 10368-10384 1/2 Bellwood Avenue
Los Angeles, California
Converse Project No. 18-41-139-01

Mr. McGonigle:

Converse Consultants (Converse) is pleased to submit the attached report that summarizes the activities and the results of a Phase I Environmental Site Assessment (Phase I ESA) that was conducted at the referenced property.

A summary of the assessment is presented in the Executive Summary, as well as in Sections 8.0, 9.0, and 10.0 of the report. Recognized Environmental Conditions were identified during this assessment.

We appreciate the opportunity to be of service. Should you have any questions or comments regarding this report, please contact Spencer Wagner at (562) 505-5219 or Norman S. Eke at (626) 930-1260.

CONVERSE CONSULTANTS

Spencer Wagner
Environmental Professional

Norman S. Eke
Senior Vice President

717 S. Myrtle Avenue, Monrovia, CA 91016
Telephone: (626) 930-1200 ♦ Facsimile: (626) 930-1212 ♦ www.converseconsultants.com

Executive Summary

The following is an Executive Summary of the Phase I Environmental Site Assessment (Phase I ESA) that was conducted by Converse Consultants (Converse). Please refer to the appropriate sections of the report for a complete discussion of these issues. In the event of a conflict between this Executive Summary and the report, or an omission in the Executive Summary, the report shall prevail.

This report presents the results of the Converse Phase I ESA performed at 10330, 10340, 10341, 10344, 10360, and 10368-10384 1/2 Bellwood Avenue in the City of Los Angeles, Los Angeles County, California, referred to as the Property in this report. Converse was retained by SBLP Century City, LLC to conduct this Phase I ESA. Our study has been conducted in order to identify, to the extent practical within the scope of an ESA, Recognized Environmental Conditions (RECs) in connection with the Property.

Converse has compiled and reviewed information that was obtained from interviews, document research, and on-site and area reconnaissance to identify potential environmental conditions at the Property, in conformance with the ASTM Standard E: 1527-13 Environmental Site Assessment Standard Practice (ASTM Standard: E1527- 13). This Phase I ESA was conducted during the period of April 20, 2018 to May 15, 2018.

Report Section		No Further Action	REC	CREC	HREC	Other Environmental Considerations	Recommended Action
3.0	USER PROVIDED INFORMATION &		✔				The identification of PCE in soil gas at levels in excess of residential screening levels, that appear to be sourced off-site, is considered a REC.
5.2.5	Summary of Historical Property	✔					
5.2.6	Summary of Past Uses of Adjoining		✔				The former gas and oil service station operations and auto repair business, and

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Report Section		No Further Action	REC	CREC	HREC	Other Environmental Considerations	Recommended Action
							the current operation of a drycleaner and smog and oil change business on the westernmost northern adjoining property (10344 and 10344 1/2 W. Olympic Blvd.) are considered RECs in connection with the Property.
5.2.7	Summary of Past Uses of the	✔					
5.3.1		✔					
5.3.2			✔				The former gasoline service station and auto repair operations, as well as the current dry cleaning and smog and oil change operations at the northern adjoining 10344-10344 1/2 W. Olympic Boulevard property are

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Report Section		No Further Action	REC	CREC	HREC	Other Environmental Considerations	Recommended Action
							considered RECs.
5.3.3	Other Off-site Locations of	✔					
5.4	Additional Environmental					✔	Methane zone; further action needed for development.
6.3	Interior Observations of	✔					
6.4	Exterior Observations of	✔					
6.5	Current Uses of		✔				The existing dry cleaning facility and smog and oil change operations located on the northern adjoining property (10344-10344 1/2 W. Olympic Boulevard) are considered RECs in connection with the Property.
6.6	Current Uses of	✔					
7.0		✔					

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Appendix E - Regulatory Database Report

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1.0 INTRODUCTION

1.1 Purpose and Scope of Services

This report presents the results of the Converse Consultants (Converse) Phase I Environmental Site Assessment (ESA) performed at 10330, 10340, 10341, 10344, 10360, and 10368-10384 1/2 Bellwood Avenue in the City of Los Angeles, Los Angeles County, California, referred to as the Property in this report. Converse was retained by SBLP Century City, LLC (Client) to conduct this Phase I ESA. Our study has been conducted in order to identify, to the extent practical, Recognized Environmental Conditions (RECs) in connection with the Property. The term Recognized Environmental Conditions is defined in Section 1.1.1 of the American Society of Testing and Materials (ASTM) Standard Practice as the presence or likely presence of any hazardous substances or petroleum products in, at or on a property due to any release to the environment; under conditions indicative of a release to the environment; under conditions that pose a material threat of a future release to the environment.

Our work consisted of the following and was completed in general conformance with the scope and limitations of the ASTM Practice E1527-13 and complies with standards and practices set forth in 40 Code of Federal Regulations (CFR) Part 312 for AAI.

- Interviews with the Property owner representatives
- Property and vicinity reconnaissance
- Review of regulatory agency records
- Description of physical setting
- Historical review
- Interviews with public agency personnel
- Preparation of this report

1.2 Non-Scope Considerations

There are a number of non-scope issues which are sometimes assessed concurrently with a Phase I ESA. Unless specifically agreed in the contract proposal documents, these non-scope considerations are not included as part of the Phase I ESA.

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Examples of non-scope issues include:

- Asbestos-containing Building Materials
- Biological Agents
- Cultural & Historic Resources
- Diffuse Anthropogenic Pollution
- Ecological Resources
- Endangered Species
- Health & Safety
- Indoor Air Quality
- Industrial Hygiene
- Lead-base Paints
- Lead in Drinking Water
- Mold
- Non-liquid Polychlorinated Biphenyls
- Radon
- Regulatory Compliance
- Wetlands

1.3 Significant Assumptions

No assumptions were made for this assessment that need to be noted as significant.

1.4 Limitations and Exceptions

The following limitations and exceptions were encountered during the course of this assessment:

- Information requests pertaining to the Property were submitted to the following regulatory agencies: Department of Toxic Substances Control (DTSC), and City of Los Angeles Department of Sanitation; however, responses were not received during the timeframe of this assessment.

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- Converse accessed a total of five (5) vacant units (10340-10366-units 136 and 214, 10370, 10370 1/2, and 10341-Unit 7), one (1) residential garage, utility closets, and common areas (i.e. pool facilities, laundry rooms, and parking areas). Converse did not access the remaining 107 residential units and three (3) remaining residential garages.

1.5 Special Terms and Conditions

The Client was responsible for providing Attachment A of the proposal to those identified. Converse did receive a completed Attachment A, or other documents, from the identified users.

1.6 Reliance

This report is for the sole benefit and exclusive use of SBLP Century City, LLC ("Client") and its counsel, Latham & Watkins, and Eyestone Environmental in accordance with the terms and conditions attached to our proposal under which these services have been provided. Its preparation has been in accordance with generally accepted environmental practices. No other warranty, either express or implied, is made.

This report should not be regarded as a guarantee that no further contamination, beyond that which could be detected within the scope of this assessment, is present at the Property. Converse makes no warranties or guarantees as to the accuracy or completeness of information provided or compiled by others. It is possible that information exists beyond the scope of this assessment. It is not possible to absolutely confirm that no hazardous materials and/or substances exist at the Property. If none are identified as part of a limited scope of work, such a conclusion should not be construed as a guaranteed absence of such materials, but merely the results of the evaluation of the property at the time of the assessment. Also, events may occur after the Property visit, which may result in contamination of the Property. Additional information, which was not found or available to Converse at the time of report preparation, may result in a modification of the conclusions and recommendations presented.

Any reliance on this report by Third Parties shall be at the Third Party's sole risk. Should SBLP Century City, LLC wish to identify any additional relying parties not

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previously identified, a completed Application of Authorization to Use (see Appendix A of this report) must be submitted to Converse Consultants.

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2.0 PROPERTY DESCRIPTION

Item	Comment
Current Use(s) of the Property	The Property is owned by V&L Property Management, and is currently developed with 12 residential buildings consisting of 112 residential apartment units. • 10340 Bellwood Avenue is comprised of 19 units (two, two-story structures) • 10341 Bellwood Avenue is comprised of 5 units (one , two-story structures) • 10350 Bellwood Avenue is comprised of 22 units (two, two-story structures) • 10355 Bellwood Avenue is comprised of 8 units (one, two-story structure) • 10358 Bellwood Avenue is comprised of 20 units (two, two-story structures) • 10366 Bellwood Avenue is comprised of 21 units (two, two-story structures) • 10368-10384 1/2 Bellwood Avenue is comprised of 17 units (bungalows, each with their own address) In addition, there are four (4) residential garage structures, two (2) parking lots, and two (2) pool facilities. A Property location map and a field generated Property plan are provided in Appendix B. Pertinent Property photographs are provided in Appendix C.
Location and Legal Description	The Property is located at 10330, 10340, 10341, 10344, 10360, and 10368-10384 1/2 Bellwood Avenue, Los Angeles, California. The Property structures are located on the north and south sides of Bellwood Avenue, southeast of West Olympic Boulevard. The Property is located approximately 1.3-miles north of Interstate 10 (Santa Monica Freeway) and 1.5-mile east of the 405 (San Diego) Freeway. The Property consists of 3 parcels and is

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Item	Comment
	approximately 1.78-acres. The Los Angeles County Assessor's Parcel Numbers for the Property are 4315-018-029, -030, -031, -032, -033, -034, and -048. The legal description of the Property is described as the following: PARCEL 1 (APNs: 4315-018-029, and -030) LOTS 29, 30 AND 31 IN BLOCK 13 OF TRACT NO. 7260, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 78 PAGES 64 AND 65 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY. PARCEL 2 (APNs: 4315-018-031, -032, -033, and -034) LOTS 32, 33, 34, 35, 36 AND 37 IN BLOCK 13 OF TRACT NO. 7260, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 78 PAGES 64 AND 65 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY. PARCEL 3 (APN: 4315-018-048) LOTS 10, 11, 12 AND 13 IN BLOCK 14 OF TRACT NO. 7260, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 78 PAGES 64 AND 65 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY. EXCEPT THEREFROM THOSE PORTIONS OF SAID LOTS 10, 11 AND 13 INCLUDED WITHIN THE LAND DESCRIBED IN THE DEED OF TRUST RECORDED ON JULY 2, 1951 AS INSTRUMENT NO. 134, IN BOOK 36657 PAGE 180 OFFICIAL RECORDS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A POINT IN THE SOUTHWESTERLY LINE OF LOT 14 IN SAID BLOCK 14 DISTANT SOUTH 61° 39’ 50” EAST 29.74 FEET FROM THE MOST WESTERLY CORNER OF SAID LOT 14; THENCE ALONG THE SOUTHWESTERLY LINES OF SAID LOTS 14 AND 13, SOUTH 61° 39’ 50” EAST 65.11 FEET; THENCE NORTH 50° 34’ 15” EAST 78.01 FEET; THENCE NORTH 39° 25’ 45” WEST 74.05 FEET TO THE SOUTHEASTERLY LINE OF THE LAND DESCRIBED AS

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Item	Comment
	PARCEL 33-A IN DECREE OF CONDEMNATION ENTERED IN CASE NO. 428317 OF THE SUPERIOR COURT OF THE STATE OF CALIFORNIA IN AND FOR SAID COUNTY OF LOS ANGELES A CERTIFIED COPY OF SAID DECREE BEING RECORDED MAY 17, 1939 IN BOOK 16631 PAGE 117 OF OFFICIAL RECORDS; THENCE ALONG SAID SOUTHEASTERLY LINE AND ITS PROLONGATION SOUTH 50° 34' 15" WEST 93.39 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE EASTERLY AND HAVING A RADIUS OF 10 FEET; THENCE WESTERLY AND SOUTHERLY ALONG THE ARC OF SAID CURVE 19.59 FEET TO THE POINT OF BEGINNING. ALSO EXCEPT THEREFROM THAT PORTION OF SAID LOT 10, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWESTERLY CORNER OF SAID LOT 10; THENCE ALONG THE WESTERLY LINE OF SAID LOT 10, SOUTH 0° 07' 51" WEST 16.69 FEET TO THE NORTHEASTERLY LINE OF THE LAND DESCRIBED IN PARCEL 2 OF THE DEED OF TRUST RECORDED JULY 2, 1951 AS INSTRUMENT NO. 134 IN BOOK 36657 PAGE 180 OF OFFICIAL RECORDS; THENCE ALONG SAID NORTHEASTERLY LINE SOUTH 39° 25' 45" EAST 22.28 FEET, MORE OR LESS, TO THE MOST EASTERLY CORNER OF SAID LAST MENTIONED LAST; THENCE NORTH 61° 00' 00" EAST 20.71 FEET; THENCE SOUTH 1° 27' 30" WEST 24.67 FEET TO THE NORTHERLY LINE OF SAID LOT 10; THENCE SOUTH 88° 32' 30" WEST 31.61 FEET TO THE POINT OF BEGINNING. ALSO EXCEPT THEREFROM THAT PORTION OF SAID LOT 13, LYING NORTHWESTERLY OF A LINE BEARING NORTH 50° 34' 15" EAST FROM A POINT IN THE SOUTHEAST LINE OF SAID LOT 13, DISTANT ALONG SAID SOUTHWEST LINE AND ITS NORTHWESTERLY PROLONGATION SOUTH 61° 39' 50" EAST 94.85 FEET FROM THE MOST WESTERLY CORNER OF SAID LOT 14 IN SAID BLOCK 14.
Zoning	According to the City of Los Angeles, Planning Department, the

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Item	Comment
Information	zoning for the Property is R3-1-O and C2-1VL-O, which are defined as a multiple dwelling zone and commercial zone, respectively.
Property Characteristics	The Property consists of three (3) irregular-shaped parcels containing approximately 1.78-acres. The Property is generally level and the majority of the Property is covered with residential apartment buildings and parking areas. The only buildings on the Property are wood-framed with concrete foundations and reinforced walls. The Property parcels are located on the north and south sides of Bellwood Avenue. Properties in the general area are used for commercial and residential purposes.
Description of Property Structure(s)	There are 12 single and two-story residential buildings located on the Property, and the buildings consist of 41,939 square feet. There are 112 residential apartment units between the 12 residential buildings. In addition, there are four (4) residential garages, carports, two (2) parking areas, and two (2) swimming pools. The buildings consist of wood-framed structures, with concrete masonry unit (CMU), and/or brick reinforced walls and outbuildings.
The following services were present at the Property at the time of the assessment.	
Electricity:	Los Angeles Department of Water and Power (LADWP)
Gas:	Southern California Gas
Potable Water:	Los Angeles Department of Water and Power
Sanitary Sewer:	City of Los Angeles Sanitation Department

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Item	Comment
Heating, Ventilation, Air Conditioning (HVAC):	Roof-mounted package HVAC units, and window-mounted units.
Solid Waste:	Waste Management

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3.0 USER PROVIDED INFORMATION & RESPONSIBILITIES

3.1 Requested Documents and Information

The ASTM E1527-13 specifies that the User, SBLP Century City, LLC provide any helpful documents that may be available, as listed below.

- Environmental site assessment or environmental compliance audit reports
- Environmental permits or hazardous waste generator notices/reports
- Registrations for aboveground and underground storage tanks
- Septic systems, oil wells, or water wells
- Registrations for underground injection systems
- Material Safety Data Sheets; Community Right to Know Plans; or Safety, Preparedness and prevention Plans; Spill Protection Countermeasures and Control Plans
- Reports regarding hydrologic conditions on the Property or surrounding area
- Notices or other correspondence form any government agency relating to past or current violations of environmental laws with respect to the Property or relating to environmental liens encumbering the Property.
- Hazardous waste generator notices or reports
- Geotechnical studies
- Risk assessments
- Recorded Activity Use Limitations (AULs)
- Proceedings regarding hazardous substances and petroleum products including any pending, threatened or past: litigation; administrative proceedings; or notices from any governmental entity regarding possible violations of environmental laws or other possible liability related to hazardous substances or petroleum products.

The following information/documentation was provided by SBLP Century City, LLC, and is summarized below.

A Transaction Screen Process (TSP) report, dated September 27, 2012, was prepared by Converse for the Property. Based on information obtained during the TSP, there was a low potential for environmental concern to the Site from known property uses. The Site was not identified in the EDR-Radius Map Report on databases suggesting subsurface contamination and no evidence of a spill of hazardous materials storage/wastes was noted during the Site reconnaissance.

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Adjacent properties were of concern based on use for dry cleaning and a gasoline service station. Records indicated that a prior Phase II ESA was conducted that addressed dry cleaner solvent impact to soil, but did not address soil vapor concerns from the drycleaners nor the prior gas station use. It was recommended in the TSP report that further soil vapor assessment was warranted.

Converse completed a Phase II ESA for the Property, and the findings of that assessment were presented in a Phase II ESA report dated November 7, 2012. The scope of that assessment included six (6) borings completed to 15 feet beneath ground surface (bgs), and collection of soil vapor samples from depths of 5 and 15 feet bgs. All soil vapor samples were analyzed for volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) in the gasoline range. All reported TPH and VOC concentrations were below their respective screening levels for residential and commercial/industrial land uses, with the exception of tetrachloroethylene (PCE), which was reported in 12 samples with a maximum concentration of 13,000 ug/m3. Concentrations of PCE in three (3) samples collected from borings B1 and B2 (located on the northern most parcel of the Property) exceeded the screening level for residential land use, but all concentrations were less than the screening level for a commercial/industrial land use. It was recommended that a HHSE be completed to evaluate the risk associated with the detected PCE concentrations.

A HHSE, dated November 21, 2012, was prepared by Converse to evaluate the reported concentrations of PCE. The total estimated cancer risk resulting from the maximum PCE concentration under a residential land use scenario was determined to be 1.40×10^{-5}, which is within the EPA discretionary risk range of 1.0×10^{-4} to 1.0×10^{-6}. It is noted that the maximum PCE concentration evaluated in the HHSE was approximately 20 times more than the maximum concentration of PCE previously detected at the Site of 500 ug/m3 at location B5.

Converse completed a Phase II ESA for a portion of the Property, and the findings of that assessment were presented in a Phase II ESA report dated January 24, 2017. The scope of the assessment included four (4) borings completed to 15 feet bgs. Soil vapor samples were collected from temporary probes set at 5 and 15 feet bgs at each boring location. A total of 36 VOCs were detected in one or more of the vapor samples collected from the Site. A majority of the compounds detected are commonly associated with gasoline and solvents, which is consistent with the suspected impacts from the RECs identified in the Converse TSP report. Concentrations of benzene, 1-3 butadiene, and PCE were reported in 1 or more samples at concentration that exceed their calculated screening level for residential land use, but are less than the

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screening levels for commercial land use. The maximum concentration of all other compounds were less than their screening level for residential land use. Converse noted that benzene is commonly associated with gasoline, and the source could be from the historic gas station. 1-3 butadiene is a product of combustion, and the source for this compound is unknown. PCE is a solvent, and the source was likely the historic cry cleaning operation or automotive repair facility. The maximum PCE concentrations reported during this assessment are generally consistent with the concentrations previously reported in sample B5- 15. Converse concluded the following:

- Although a HHSE was not completed using the results of this assessment, based on all reported VOC concentrations being less than the screening levels for commercial land use, it is believed that the risk to Site occupants would be consistent with the findings of the prior HHSE which found the risk to Site occupants under a residential land use scenario to be within the EPA risk management range.
- Based on the results of this assessment, the impacts to the Site from historic uses of adjacent properties does not appear to have significantly changed since the prior assessment completed in 2012. The threat posed to the health of Site occupants from the chemical concentrations reported are believed to be within the EPAs risk management range.

3.2 User Provided Information

Section 6 of ASTM E1527-13 outlines specific User's responsibilities. This information will help identify the possibility of RECs in connection with the Property. The ASTM Standard provides a questionnaire to help the User to comply with the statutory requirements to perform tasks which would help identify RECs. Converse included the questionnaire as Attachment A to our proposal. In general, any Users should make Converse aware of information they have regarding the following:

- Environmental Cleanup Liens filed or recorded against the Property
- Activity and land use limitations that are in place on the Property or have been filed or recorded in a registry.
- Specialized knowledge or experience of the person seeking to qualify for the Legal Liability Protections (LLP)
- Relationship of the purchase price to fair market value of the Property if it were not contaminated
- Commonly known or reasonably ascertainable information about the Property

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- The degree or obviousness of the presence or likely presence of contamination at the Property, and the ability to detect this contamination by appropriate investigation.

The following information was requested from the Use.

3.2.1 Environmental Cleanup Liens

The title records were provided and are included in Appendix E, No information regarding environmental liens was provided by the client.

3.2.2 Activity and Use Limitations

The User did not provide any information indicating they were aware of any AULs.

3.2.3 Specialized Knowledge or Experience

The User did not provide any information indicating they had specialized knowledge or experience related to the Property or nearby property.

3.2.4 Reason for Significantly Lower Purchase Price

Converse has no information regarding the purchase price of the Property or comparable properties. The User has not indicated to Converse that there is any conclusion that there was a lower purchase price because of known or suspected contamination at the Property.

3.2.5 Commonly Known or Reasonably Ascertainable Information

The User did not provide any information about past uses, specific chemicals at the Property, past spills, environmental cleanup or other reasonably ascertainable information regarding the Property.

3.2.6 Obviousness of Contamination

The User did not provide any information, beyond those reports previously

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prepared by Converse and summarized in Section 3.1, based on their knowledge or experience that would be obvious indicators of contamination on the Property.

Unless specifically stated otherwise in the Scope of Services, the purpose of this Phase I ESA was to qualify for the landowner liability protections to CERCLA Liability as described in ASTM E1527-13.

Business risk unrelated to the CERCLA innocent landowners defense are only assessed as specifically agreed in the Scope of Services and discussed in Section 11.0, Additional Non-Scope Services, of this report.

The User provided past environmental reports which are summarized in Section 3.1.

3.3 Continuing Obligations

In order to assert a LLP, the User must satisfy a number of statutory requirements that are generally referred to as Continuing Obligations, which are outside the Scope of Services of the Phase I ESA. Examples of Continuing Obligations include providing legally required notices, stopping continuing releases and complying with land use restrictions. Failure to comply with these and other statutory post-acquisition requirements will jeopardize liability protection.

It is the responsibility of the User to comply with the Continuing Obligations requirements of ASTM E1527-13 and AAI. Anyone seeking LLP protections should take independent action beyond this Phase I ESA to perfect their position.

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4.0 OWNER PROVIDED INFORMATION

The ASTM E1527-13 specifies that the Property owner and the Key Site Manager provide any helpful documents that may be available as listed below.

- Environmental site assessment or environmental compliance audit reports
- Environmental permits or hazardous waste generator notices/reports

- Registrations for aboveground and underground storage tanks
- Septic systems, oil wells, or water wells
- Registrations for underground injection systems
- Material Safety Data Sheets; Community Right to Know Plans; or Safety, Preparedness and Prevention Plans; Spill Protection Countermeasures and Control Plans
- Reports regarding hydrologic conditions on the Property or surrounding area
- Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the Property or relating to environmental liens encumbering the Property.
- Hazardous waste generator notices or reports
- Geotechnical studies
- Risk assessments
- Recorded AULs
- Proceedings regarding hazardous substances and petroleum products including any pending, threatened or past: litigation; administrative proceedings; or notices from any governmental entity regarding possible violations of environmental laws or other possible liability related to hazardous substances or petroleum products.

Converse was provided with previous environmental reports completed for the Property Owner by the User. See Section 3.1 for summaries of the reports. No other records provided by Owner.

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5.0 RECORDS REVIEW

5.1 Physical Setting

Item	Comments
Physical Setting:	The Property is located approximately 230 feet above mean sea level with surface topography sloping towards the west-southwest (United States Geological Survey [USGS] Topographic Map, Beverly Hills, California, photo revised 1999).
Geology:	The Property is underlain by unconsolidated and semi-consolidated older alluvium, lake, playa, and terrace deposits (Division of Mines and Geology, Geologic Map of California, 2010). The Property is in the Los Angeles City Department of Building and Safety designated methane zone.
Groundwater:	The nearest groundwater well to the Property is located approximately 2¾-mile west of the Site near the intersection of Wilshire Boulevard and South Bundy Drive. According to the Department of Public Works, when State Well number 2535J was measured on April 27, 2009, the depth to groundwater was recorded at 25.55 feet below ground surface (bgs). The surface elevation was recorded at 211.25 feet. The direction of regional groundwater is believed to follow surface topography to the west-southwest. According to reports prepared for the western adjoining site (10350 W. Olympic Boulevard) obtained from the State Water Resources Control Board's Geotracker database, groundwater monitoring was conducted at the adjoining site from as early as 1986 to December 2008. The most recent groundwater monitoring report was prepared by Stantec Consulting on January 13, 2009. The report indicated that depth to groundwater at the adjoining site ranges from 56.11 feet bgs to 97.99 feet bgs, and that groundwater gradient is approximately 0.12 feet per foot to the southwest. A discussion of groundwater monitoring results is presented in Section 5.4-State

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Item	Comments
	Agencies.
Potable Water Supply:	Potable water is supplied by LADWP via the Los Angeles Aqueducts, local groundwater, and through the purchase of imported water from the Metropolitan Water District (MWD).

5.2 Historical Review

5.2.1 Aerial Photograph and Map Review

Available historical aerial photographs and historical maps, which were provided by Environmental Risk Information Services (ERIS), were reviewed.

A summary of the review is provided in the following table. Copies of the aerial photographs and maps are provided in an appendix to this report.

Table 1 – Historical Resource Review

Property	Adjoining Properties	General Vicinity
1894 Topographic Map		
Undeveloped with a road located south of the Property.	Undeveloped	Undeveloped
1896 Topographic Map		
Undeveloped with a road located south of the Property.	Undeveloped	Undeveloped
1898 Topographic Map		
Undeveloped with a road	Undeveloped	Undeveloped

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Property	Adjoining Properties	General Vicinity
located south of the Property.		
1900 Topographic Map		
Undeveloped with a road located south of the Property.	Undeveloped	Undeveloped
1902 Topographic Map		
Undeveloped with a road located south of the Property.	Undeveloped	Undeveloped
1921 Topographic Map		
Undeveloped	Undeveloped	Undeveloped
1925 Topographic Map		
Undeveloped	Undeveloped	Undeveloped
1926 Fire Insurance Map		
Vacant	Vacant land and residential use,	The general vicinity appears to be a mix of vacant and undeveloped land, and residential developments. A commercial complex is located east of the Property.
1928 Aerial Photograph		
The Property appears to be vacant, undeveloped	The adjoining properties to the east and south	The general vicinity appears to be a mix of

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Property	Adjoining Properties	General Vicinity
land.	appear to be developed for residential use. The remaining adjoining properties appear to be vacant, undeveloped land.	vacant and undeveloped land, and residential developments. A commercial complex is located east of the Property.
1934 Topographic Map		
Undeveloped	Undeveloped land and residential dwellings	Undeveloped land, residential dwellings, and commercial developments.
1938 Aerial Photograph		
There are no significant identifiable changes to the Property.	The adjoining properties to the east, south, and west appear to be developed for residential use. The remaining adjoining properties appear to be vacant, undeveloped land.	The general vicinity appears to be a mix of undeveloped land, and or residential developments. A large commercial complex is visible east of the Property.
1948 Aerial Photograph		
The portion of the Property located south of Bellwood Avenue has been developed with the 11 residential buildings currently located on the south side of Bellwood Avenue. The northern parcel (north of Bellwood Avenue) remains vacant	The easternmost northern adjoining property appears developed with a gas and oil service station. The adjoining properties to the east, southeast, south, and southwest are developed for residential use. A gas and oil	Residential and commercial

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Property	Adjoining Properties	General Vicinity
and undeveloped.	service station is located on the western adjoining property.	
1950 Fire Insurance Map		
There are no significant identifiable changes to the Property.	The western adjoining property, and easternmost northern adjoining property are identified as being occupied by a filling station and gas and oil service station, respectively. There are no significant identifiable changes in use on the remaining adjoining properties.	Residential and commercial
1950 Topographic Map		
Urban use	Urban use	Urban use
1952 Aerial Photograph		
The northern Property parcel has been developed with the existing residential building. There are no significant identifiable changes to the remaining portions of the Property.	Gas and oil service stations are located on two (2) of the northern adjoining properties and the western adjoining property. There are no significant identifiable changes to the remaining adjoining properties.	Residential and commercial
1960 Aerial Photograph		

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Property	Adjoining Properties	General Vicinity
Residential	There are no significant identifiable changes to the adjoining properties.	Residential and commercial
1965 Topographic Map		
Urban use	Urban use	Urban use
1967 Aerial Photograph		
Residential	There are no significant identifiable changes to the adjoining properties, with the exception of the western adjoining property (along Bellwood Avenue) which has been developed with the existing commercial structure.	Residential and commercial
1969 Fire Insurance Map		
Residential	The westernmost northern adjoining property is listed as being occupied by a gas and oil service station. The easternmost northern adjoining property is listed as being occupied by a gas and oil service station. The western adjoining property is listed as being occupied by a filling station.	Residential and commercial

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Property	Adjoining Properties	General Vicinity
	There are no significant identifiable changes to the remaining adjoining properties.	
1972 Aerial Photograph		
Residential	There are no significant identifiable changes to the adjoining properties.	Residential and commercial
1972 Topographic Map		
Urban use	Urban use	Urban use
1980 Aerial Photograph		
Residential	There are no significant identifiable changes to the adjoining properties.	Residential and commercial
1981 Topographic Map		
Urban use	Urban use	Urban use
1985 Aerial Photograph		
Residential	The gas and oil service station that was previously located on the easternmost northern adjoining property has been razed. There are no significant identifiable changes to the remaining adjoining properties.	Residential and commercial
1989 Aerial Photograph		

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Property	Adjoining Properties	General Vicinity
Residential	A commercial building has been constructed at the location of the former gas and oil service station on the easternmost northern adjoining property. There are no significant identifiable changes to the remaining adjoining properties.	Residential and commercial
1994 Aerial Photograph		
Residential	Residential and commercial	Residential and commercial
1994 Topographic Map		
Urban use	Urban use	Urban use
1995 Topographic Map		
Urban use	Urban use	Urban use
2005 Aerial Photograph		
Residential	The gas and oil service station located on the western adjoining property has been razed. The remaining properties are developed for commercial and residential uses.	Residential and commercial
2010 Aerial Photograph		

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Property	Adjoining Properties	General Vicinity
Residential	Residential and commercial	Residential and commercial
2012 Aerial Photograph		
Residential	The former gas and oil service station site located west of the Property has been developed with the existing commercial building. The remaining properties are developed for commercial and residential uses.	Residential and commercial
2014 Aerial Photograph		
Residential	Residential and commercial	Residential and commercial
2015 Topographic Map		
Urban use	Urban use	Urban use
2016 Aerial Photograph		
Residential	Residential and commercial	Residential and commercial

5.2.2 Building Permit Review

Available building permits were reviewed using the City of Los Angeles Department of Building & Safety's online building permit repository. A chronological summary is provided below.

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Date	Comments
6/7/1940	10368-10384 Bellwood Ave. - Permits to construct six residential buildings (single and two-story buildings) and four residential garages were issued to Mr. Walter Blake.
12/20/1949	10344-10358 Bellwood Ave. - A permit to remodel an existing balcony and porch was issued to Bellwood Corp.
2/26/1953	10340-10366 Bellwood Ave. - A permit to install a new 6 foot block wall was issued to Jaffe Realty Co.
8/5/1958	10368-10384 1/2 Bellwood Ave. - Permits to sandblast existing walls were issued to Mr. Sam Ziff.
2/2/1961	10350 Bellwood Ave. - A permit to construct a swimming pool was issued to Bellwood Manor Apts.

5.2.3 City Directories

Table 2 – City Directory Summary

Listing	Year
Property	
Residential	1971 1975 1980 1985 1990 1995 2006
10390 Bellwood Avenue (western adjoining property)	

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Listing	Year
Chas Townsend AIA	1985 1990
Face Forward Skin Care Si Beaux Salon	1995
John La Joie Beauty Salon Si Beaux Salon	2006 2011
Si Beaux Salon	2016
10326 W. Olympic Boulevard (northern adjoining property)	
Martin Dick Union Service	1971 1975
All State Rent-A-Car	1980
The Plant Warehouse	1985
10330 W. Olympic Boulevard (northern adjoining property)	
Century City Inn	1990
Century City Inn Fam & Company Papademetropoulous Prima Construction, Inc.	1995
Avis Rent-A-Car Century City Inn & Suites Holiday Inn Express	2000
Holiday Inn Express	2011 2016
10344 W. Olympic Boulevard	
Max's Texaco Service	1971

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Listing	Year
Max's Texaco Service Steve's Auto Insurance	1976 1980
Century City Automotive Max's Automotive Service Steve's Custom Interiors	1985
Max's Automotive Service Mr. Polish Steve's Custom Interiors Texaco	1990
Auto Tech Texaco Steve's Custom Auto	1995
E&Z Automotive Michael's Cleaners	2000
In & Out Smog & Oil Change Michael's Cleaners	2006
Michael's Cleaners	2011 2016
10350 W. Olympic Boulevard (western adjoining property)	
Burn's Dudley ARCO Burn's Richfield Service	1971
Shane's ARCO Serivce	1975 1980
Century City Mini Market	1985
Century City AM Market	1990
Century City Mini Market	1995

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5.2.4 Data Failure

Historical information regarding the Property indicated the Property was undeveloped land as early as 1894. Therefore, no historical data failure occurred during this assessment.

5.2.5 Summary of Historical Property Use

From as early as 1894 to 1938, the Property was undeveloped. In 1940, building permits for 11 residential buildings and associated residential garages located on the southern Property parcels (south of Bellwood Avenue) were issued. These structures were all visible on the 1948 aerial photograph. By 1952, the 12th residential building, located on the northern Property parcel (north of Bellwood Avenue) had been constructed. The Property has remained in the same configuration since 1952.

5.2.6 Summary of Past Uses of Adjoining Properties

The adjoining properties were primarily undeveloped land and or developed for residential use from as early as 1894 to 1938.

From as early as 1948, gas and oil service stations were located on two (2) northern properties, and one (1) western adjoining property.

The gas and oil service stations on the easternmost northern adjoining property (10326 W. Olympic Blvd.) appears to have operated from as early as 1948 to 1985. The property was redeveloped by 1989 with the existing hotel building.

The gas and oil service station located on the westernmost northern adjoining property (10344 W. Olympic Blvd.) appears to have operated from as early as 1948 to at least 1995. The Property was then occupied by auto service and smog businesses from as early as 2000 to 2006, and by Michael's Cleaners from as early as 2006 to the present.

Based on regulatory records, the gas and oil service station on the western adjoining property (10350 W. Olympic Blvd.) appears to have operated from as early as 1948 to 1998, when the USTs were removed. The site was redeveloped with the existing retail building in 2012.

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The western adjoining property located at 10390 Bellwood Avenue has been occupied by salon businesses from as early as 1995 to the present.

The remaining adjoining properties have remained in residential use since first developed in the 1920s through the 1940s.

5.2.7 Summary of Past Uses of the Surrounding Area

The general vicinity was primarily undeveloped land from as early as 1894 to 1925. The surrounding areas were developed for primarily residential and commercial uses beginning in the late 1920s and continuing through the early 2000s.

5.3 Results of Environmental Records Sources Review

An ERIS Database Report prepared specifically for the Property, adjoining properties and other off-site locations of concern. The search included queries to the following databases for cases within specified ASTM search distances. A copy of the database report is provided in an appendix to this report.

5.3.1 Property Listings

The Property was not identified on the databases in the ERIS report.

5.3.2 Adjoining Properties

The following adjoining properties were identified in the report:

Surrounding Properties Summary

Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
HAZNET	IN & OUT	10344 1/2	0.02/	-9.0	The facility

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Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
	SMOG AND OIL CHANGE	W OLYMPIC BLVD, WEST LOS ANGELES, CA, 90064	WNW		was listed as inactive as of June 30, 2007.
CERS HAZ	MICHAEL'S CLEANERS	10344 W OLYMPIC BLVD UN 1, LOS ANGELES, CA, 90064	0.02/ WNW	-8.0	Several notices of violation were issued for failure submit and retain necessary documentation, and failure to train personnel.
DRYCLEANERS	MICHAELS CLEANERS	10344 W OLYMPIC BLVD, LOS ANGELES, CA, 900640000	0.02/ WNW	-8.0	The facility was listed in this database as an active dry cleaners as of 2009.
DRYCLEANERS	MICHAELS CLEANERS	10344 W OLYMPIC BLVD, LOS ANGELES, CA, 90036	0.02/ WNW	-8.0	The facility was listed in this database as an active dry cleaners

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Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
					as of 2017.
EMISSIONS	MICHAEL'S CLEANERS, NABIL SAAD, DBA	10344 W OLYMPIC BLVD, LOS ANGELES, CA, 90064	0.02/ WNW	-8.0	No pertinent information was provided in the database.
HHSS	MAXS TEXACO SERVICE	10344 W. OLYMPIC BLVD., WEST LOS ANGELES, CA, 90064	0.02/ WNW	-8.0	The site is listed in this database in 1988 for the operation of one (1) 4,000-gallon premium fuel UST, one (1) 4,000-gallon diesel fuel UST, one (1) 2,000-gallon regular fuel UST, and one (1) 500-gallon waste-oil UST. This operation of these USTs is considered

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Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
					a REC in connection with the Property.
LA CITY HAZMAT	MICHAEL'S CLEANERS	10344 W OLYMPIC BLVD # 1, LOS ANGELES, CA, 90064	0.02/ WNW	-8.0	The facility is listed as having an active hazardous materials inventory as of 2017.
LA CITY HAZMAT	K-G AUTO	10344 W OLYMPIC BLVD, LOS ANGELES, CA, 90064	0.02/ WNW	-8.0	The facility is listed as having an inactive hazardous materials inventory as of 2017.
HIST TANK	MAX'S TEXACO SERVIE	10344 W. OLYMPIC BLVD., WEST LOS ANGELES, CA,	0.02/ WNW	-8.0	The facility is listed as having 5 historical USTs.
RCRA SQG	MICHAELS CLEANERS	10344 W OLYMPIC BLVD, LOS ANGELES,	0.02/ WNW	-8.0	The facility is listed as a small quantity

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Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
		CA, 90064			generator with no violations.
UST LA CITY	K-G AUTO	10344 W OLYMPIC BLVD, LOS ANGELES, CA, 90064	0.02/ WNW	-8.0	The facility is listed as an inactive UST facility.
LA CITY HAZMAT	IN AND OUT SMOG AND OIL CHANGE	10344 1/2 W OLYMPIC BLVD UN 2, LOS ANGELES, CA, 90064	0.02/ NW	-8.0	This facility is listed as an inactive hazardous material inventory facility as of 2017.
DELISTED TNK	ARCO FAC. #1251	10350 W OLYMPIC BLVD # 1251, LOS ANGELES, CA, 90064	0.03/ WNW	-10.0	Case-closed status.
CERS HAZ	Ralphs Grocery #156	10309 W. OLYMPIC BLVD., LOS ANGELES, CA, 90064	0.03/ NNW	-2.0	Based on the type of listing, this site is not expected to be an environmental concern in

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Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
					connection with the Property.
DRYCLEANERS	CENTURY WEST NORGE CLEANERS	10309 W OLYMPIC BLVD, LOS ANGELES, CA, 900640000	0.03/ NNW	-2.0	Based on the location of the site, this site is not expected to be an environmental concern in connection with the Property.
EMISSIONS	CENTURY WEST NORGE VILLAGE	10309 W. OLYMPIC BL., LOS ANGELES, CA, 90064	0.03/ NNW	-2.0	Based on the type of listing, this site is not expected to be an environmental concern in connection with the Property.
LA CITY HAZMAT	RALPHS GROCERY #156	10309 W OLYMPIC BLVD # 156, LOS ANGELES,	0.03/ NNW	-2.0	Based on the type of listing, this site is not expected to

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Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
		CA, 90064			be an environmental concern in connection with the Property.
LA CITY HAZMAT	CENTURY WEST NORGE VILLAGE	10309 W OLYMPIC BLVD, LOS ANGELES, CA, 90064	0.03/ NNW	-2.0	Based on the type of listing, this site is not expected to be an environmental concern in connection with the Property.
HHSS	SHANE YENIKOMSHIAN	10350 W OLYMPIC BLVD, LOS ANGELES, CA, 90064	0.03/W	-11	The database identifies five (5) historical USTs that were operated at the site. Based on the case-closure status of the facility, this site is not

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Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
					expected to be an environmental concern in connection with the Property.
LA CITY HAZMAT	ARCO - AM/ PM MINI MARKET #1251	10350 W OLYMPIC BLVD, LOS ANGELES, CA, 90064	0.03/W	-11.0	Based on the case-closed status of the facility, this site is not considered a REC in connection with the Property.
HIST TANK	SHANE YENIKOMSHIAN	10350 W OLYMPIC BLVD, LOS ANGELES, CA,	0.03/W	-11.0	Based on the case-closed status of the facility, this site is not considered a REC in connection with the Property.
UST LA CITY	ARCO - AM/ PM MINI	10350 W OLYMPIC	0.03/W	-11	Based on the

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Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
	MARKET #1251	BLVD, LOS ANGELES, CA, 90064			case-closed status of the facility, this site is not considered a REC in connection with the Property.
WASTE DISCHG	ARCO STATION #1251	10350 OLYMPIC, LOS ANGELES, CA, 90064	0.03/W	-11.0	Based on the case-closed status of the facility, this site is not considered a REC in connection with the Property.

5.3.3 Other Off-site Locations of Concern

No other offsite locations of concern were identified in the ERIS report.

5.3.4 Orphan Listings

The database report identified six (6) orphan listings. The locations of sites that were identified by address were found to be in the general vicinity of the Property; however, due to distance, location with respect to the direction of regional groundwater, and/or type of listing were determined to have a low potential for environmental concern to the Property.

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Other orphan sites were identified only by street name. These street names were found in the general vicinity of the Property; however, the specific site locations could not be determined. These orphan sites appeared to have a low potential for environmental impact to the Property due to one or more of the following: type of regulatory listing and/or distance from the Property.

5.4 Additional Environmental Record Sources

Federal Agencies

Federal Agencies	
Source	**Comments**
U.S. Department of Transportation, Pipeline and Hazardous Material Safety Administration (PHMSA)	PHMSA online mapping system for gas transmission pipelines and hazardous liquid pipelines on the Property or adjacent properties was reviewed (https://www.npms.phmsa.dot.gov/PublicViewer/). No pipelines were identified on the Property or adjacent properties.

State Agencies

State Agencies	
Source	**Comments**
California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC)	As of the date of this report, the DTSC has not responded to our records request. The DTSC Envirostor online database (https://www.envirostor.dtsc.ca.gov/public/) was reviewed for information pertaining to the Property or adjoining properties. The Property and adjoining properties were not listed in the database.

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State Agencies	
Source	**Comments**
Cal/EPA, Regional Water Quality Control Board (RWQCB)	The RWQCB had no records on file regarding underground storage tank (UST) or WIP issues at the Property. The Geotracker website (http://geotracker.waterboards.ca.gov/) was reviewed for information, and the Property was not listed in the database; however, the western adjoining property was listed in the database. A partial summary of activities pertaining to a closed-case at the site is as follows: • The database indicated that groundwater monitoring was conducted at the western adjoining site (10350 W. Olympic Boulevard) from as early as 1986 to December 2008. The most recent groundwater monitoring report was prepared by Stantec Consulting on January 13, 2009, and presented the results of the fourth quarter 2008 groundwater monitoring event. The report indicated that depth to groundwater at the site ranges from 56.11 feet bgs to 97.99 feet bgs, and that groundwater gradient is approximately 0.12 feet per foot to the southwest. Monitoring well GT-2 was the nearest well to the Property prior to its' destruction. The sample from the well was analyzed for gasoline range TPH, benzene, toluene, ethylbenzene, and xylenes (BTEX), oxygenates, and ethanol. According to the report, the sample was non-detect for all constituents, with the exception of ethylbenzene in which the sample contained a J-flagged concentration of 0.71J. The J-flagged concentration indicates that the concentration

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State Agencies	
Source	**Comments**
	was estimated due to the low level being less than the reporting limit but above the method detection limit (MDL). • According to data obtained from the closure report (April 26, 2007), PCE was detected in groundwater samples collected from the site in 1987, with a maximum concentration of PCE equivalent to 770,000 micrograms per liter (ug/L) detected in a well located in the northern portion of the site (downgradient from the adjacent cleaners located at 10344 W. Olympic boulevard). The PCE concentrations in groundwater samples were attributed to the offsite cleaners. In February 2007, groundwater samples from 10 groundwater monitoring wells (on site and off site) were analyzed for VOCs. The highest concentration of PCE (32 ug/l) was detected in a well located in the eastern portion of the site (near Bellwood Avenue). PCE was also detected in the well nearest the subject Property (GT-2) at a concentration of 3.9 ug/l. Results of historical groundwater sampling at the western adjoining property appears to indicate that PCE use at the drycleaners (Michael's Cleaners - 10344 W. Olympic Boulevard) has impacted groundwater downgradient (southwest) of the cleaners. Based on this information, it is possible that groundwater beneath the Property has also been impacted by historical solvent use at the adjoining cleaners.
California Department of Conservation,	According the DOGGR District 1 Map (http://maps.conservation. ca.gov/doms/doms-app.html),

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State Agencies	
Source	**Comments**
Division of Oil, Gas and Geothermal Resources (DOGGR)	there are no oil or gas wells located on the Property or adjacent properties. However, the Property is located within a methane zone.

Local Agencies

Source	Comments
South Coast Air Quality Management District (SCAQMD)	The SCAQMD has no files or records pertaining to the Property.
Los Angeles County, Department of Public Works (DPW)	The DPW website (http://ladpw.org/epd/CleanLA/OpenFileReview.aspx) was reviewed for information. There were no records pertaining to the Property on file with this agency.
City of Los Angeles Fire Department (LAFD), Hazardous Materials and UST Divisions	The LAFD website (http://www.lafd.org/fire-prevention/cupa/public-records) was reviewed for information. There were no records pertaining to the Property on file with this agency.
City of Los Angeles Department of Sanitation	As of the date of this report, the Department of Sanitation has not responded to our records request.

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6.0 PROPERTY RECONNAISSANCE

6.1 Methodology

On May 2, 2018, Converse visited the Property to evaluate present use and to identify observable environmental conditions at the Property. Our methodology involved walking the perimeters, center lines, and accessible interior areas of the buildings while noting observed evidence of present and potential environmental concerns

A field-generated map is provided in Appendix B. Pertinent Property photographs are provided in Appendix C.

6.2 Limiting Conditions

Converse's findings are based on the Property conditions observed on May 2, 2018

Converse accessed a total of five (5) vacant units (10340-10366-units 136 and 214, 10370, 10370 1/2, and 10341-Unit 7), one (1) residential garage, utility closets, and common areas (i.e. pool facilities, laundry rooms, and parking areas). Converse did not access the remaining 107 residential units and three (3) remaining residential garages.

6.3 Interior Observations of Property

During our Property visit, Converse made the following observations of the interior of the Property's building(s):

Table 3 – Interior Observations of Property

Item or Condition	Observed Evidence	No Evidence Observed	Comments
Hazardous	✔		Approximately 45 one-gallon cans of paint, two (2) five-gallon buckets

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Item or Condition	Observed Evidence	No Evidence Observed	Comments
Petroleum Products:			of roof tar, four (4) liters of bleach, one-gallon of Simple Green, and eight (8) containers of grout and/or sealant were observed in the maintenance closet within the apartment complex located at 10340-10366 Bellwood Avenue.
Storage Tanks & Related		✔	
		✔	
Standing Surface Water or Other		✔	
Drums & Other Containers of Hazardous Substances, Petroleum Products, or Other Unidentified	✔		See above.
Transformers or Equipment containing Polychlorinated		✔	
Heating/Cooling	✔		Window-mounted air conditioning units were observed in each of the

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Item or Condition	Observed Evidence	No Evidence Observed	Comments
			12 residential buildings.
Stains or Corrosion on Floors, Walls or		✔	
Drains and		✔	

6.4 Exterior Observations of Property

During our Property visit, Converse made the following observations of the exterior of the Property:

Table 4 – Exterior Observations of Property

Item or Condition	Observed Evidence	No Evidence Observed	Comments
Hazardous Substances & Petroleum		✔	
Storage Tanks & Related		✔	
		✔	

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Item or Condition	Observed Evidence	No Evidence Observed	Comments
Standing Surface Water or Other		✔	
Drums & Other Containers of Hazardous Substances, Petroleum Products, or Other Unidentified		✔	
Transformers or Equipment containing Polychlorinated		✔	
Pits, Ponds, or		✔	
Stained Soil or		✔	
Stressed Vegetation (other than from		✔	
Evidence of Mounds, Depressions or Filled or Graded		✔	

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Item or Condition	Observed Evidence	No Evidence Observed	Comments
Trash or Other Solid Waste Disposal:			
Waste Water or any discharge (including storm water) into a Drain, Ditch, or Stream on or Adjacent to the	✔		Drains were observed in the decks surrounding each of the two (2) swimming pools.
Wells (active, inactive, or		✔	
Septic Systems or		✔	
		✔	
Roads, Tracks, Railroad Tracks or		✔	The Property fronts onto Bellwood Avenue.

6.5 Current Uses of Adjoining Properties

Based on our research and observations during our Property visit, the Property is bordered by the following:

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Table 5 – Adjoining Property Use

Direction	Current Development
North:	West to east: • Michael's Cleaners (10344 W. Olympic Blvd.) • Smog Check (10344 1/2 W. Olympic Blvd.) • Century Park Hotel (10330 W. Olympic Blvd.) • Courtyard By Marriott (10320 W. Olympic Blvd.)
South:	Single-family residential neighborhood
East:	Single-family residential neighborhood
West:	Si Beaux Salon (10330 Bellwood Avenue), and Goodwill (10350 W. Olympic Blvd.)

6.6 Current Uses of Surrounding Area

Based on our research and observations during our Property visit, the surrounding area of the Property consists primarily of residential neighborhoods, retail stores, hotels, and commercial office space.

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7.0 INTERVIEWS

Interview:	Comments:
Property Owner:	Mr. Ty London was interviewed during the Property reconnaissance. According to Mr. London, V&L Properties has owned the Property since 2011. Mr. London stated that the Property has only been developed for residential use. Mr. London stated that he was unaware of any environmental issues related to the Property, but indicated that minor amounts of hazardous materials were present in a maintenance room in the 10340-10366 residential building (see Section 6.3 for a listing of materials observed). Mr. London indicated that a dry cleaner is located north of the Property (Michael-Cleaners - 10344 W. Olympic Blvd.) and that a gas and oil service station used to operate at the same address. Mr. London also indicated that gas and oil service station formerly operated at the current location of the Goodwill on the western adjoining property (10350 W. Olympic Blvd.). Converse has previously performed investigations at the Property with Mr. London being the client. The results of these investigations are summarized in Section 3.1
Tenant/ Occupant:	No current residential occupants were interviewed during this assessment.
State or Local Government Officials:	Ms. Lora Trapp from SCAQMD was interviewed for information pertaining to the Property addresses. According to Ms. Trapp, the SCAQMD has no records pertaining to the Property.
Owners and Occupants of Neighboring Sites:	No interviews of owners or occupants of neighboring sites were conducted.

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8.0 FINDINGS

A cursory summary of findings is provided below. However, details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

From as early as 1894 to 1938, the Property was undeveloped. In 1940, building permits for 11 residential buildings and associated residential garages located on the southern Property parcels (south of Bellwood Avenue) were issued. These structures were all visible on the 1948 aerial photograph. By 1952, the 12th residential building, located on the northern Property parcel (north of Bellwood Avenue) had been constructed. The Property has remained in the same configuration since 1952.

During the Property reconnaissance, the following observations were made:

- Approximately 45 one-gallon cans of paint, two (2) five-gallon buckets of roof tar, four (4) liters of bleach, one-gallon of Simple Green, and eight (8) containers of grout and/or sealant were observed in the maintenance closet within the apartment complex located at 10340-10366 Bellwood Avenue.

According to the DOGGR online database, the Property is located within a City of Los Angeles methane zone.

The Property was not identified in the ERIS database report.

From as early as 1948, gas and oil service stations were located on two (2) northern properties, and one (1) western adjoining property (and a dry cleaners).

- The gas and oil service stations on the easternmost northern adjoining property (10326 W. Olympic Blvd.) appears to have operated from as early as 1948 to 1985. The property was redeveloped by 1989 with the existing hotel building.
- The gas and oil service station located on the westernmost northern adjoining property (10344 W. Olympic Blvd.) appears to have operated from as early as 1948 to at least 1995. The Property was then occupied by auto service and smog businesses from as early as 2000 to 2006, and by Michael's Cleaners from as early as 2006 to the present, The site was listed in multiple databases within the ERIS database report based on the past and current operations at the site.
- Based on regulatory records, the gas and oil service station on the western adjoining

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property (10350 W. Olympic Blvd.) appears to have operated from as early as 1948 to 1998, when the USTs were removed. Levels of gasoline range TPH, BTEX, oxygenates, and ethanol were still present in onsite soils and groundwater when the site was issued a "case-closure" designation in February 2009. In addition, PCE was detected in groundwater samples in two sampling events (1987 and 2007) in wells located downgradient of the existing dry cleaners. The site was redeveloped with the existing retail building in 2012. The site was listed in multiple databases in the ERIS database report based on the former gas and oil service station operations.

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9.0 OPINION

The existing residential developments on the Property parcels are not considered a REC in connection with the Property.

The identification of quantities of various potentially hazardous materials in the maintenance closet within the apartment complex located at 10340-10366 Bellwood Avenue is not considered a REC as there was no indication of staining or leaks.

The location of the Property within a methane zone is an environmental concern that requires further action for development.

The identification of a former gas and oil service station located at the easternmost northern adjoining property (10236 W. Olympic Boulevard), is not considered a REC as the site has since been redeveloped with a hotel and underground parking garage.

The identification of a former gas and oil service station at the western adjoining property located at 10350 W. Olympic Boulevard is not considered a REC as the property was issued a case-closed designation in 2009, and the property has been redeveloped.

The former gas and oil service station and auto repair operations on the westernmost northern adjoining property (10344 W. Olympic Boulevard) are considered a REC in connection with the Property. The existing dry-cleaning operations and smog and oil-change operations on the property are considered a REC. PCE was detected as recently as 2007 in wells located downgradient of the drycleaners which indicates that drycleaning operations at the site may have impacted groundwater beneath the drycleaners and adjoining properties (including the Property).

No significant data gaps were identified during this assessment that affect the ability of the Environmental Professional (EP) to identify RECs.

There are no unusual circumstances where greater certainty is required regarding RECs.

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10.0 CONCLUSIONS AND RECOMMENDATIONS

Converse has performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM Practice E1527-13 for 10330, 10340, 10341, 10344, 10360, and 10368-10384 1/2 Bellwood Avenue, City of Los Angeles, Los Angeles County, California. Any exceptions to or deletions from this practice are described in the Limitations and Exceptions of Assessment section of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the Property except for the following:

- The identified presence of PCE in soil-vapor at levels in excess of screening levels for residential land use.
- The identification of a former gas and oil service station and auto repair business on the northern adjoining property (10344 W. Olympic Boulevard) possibly associated with on-site benzene detections.
- The identification of an existing dry cleaning business (Michael's Cleaners) and smog check and oil change business on the northern adjoining property (10344-10344 1/2 W. Olympic Boulevard) possibly associated with on-site benzene and PCE concentrations.

The Site is located within a methane zone which is an environmental concern that will require further assessment for development.

A vapor encroachment condition exists for the Property.

Concurrent Phase II assessment has been completed with results provided under seperate cover.

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11.0 DEVIATIONS AND LIMITATIONS

The following limitations and exceptions were encountered during the course of this assessment:

- Information requests pertaining to the Property were submitted to the following regulatory agencies: Department of Toxic Substances Control (DTSC), and City of Los Angeles Department of Sanitation; however, responses were not received during the timeframe of this assessment.
- Converse accessed a total of five (5) vacant units (10340-10366-units 136 and 214, 10370, 10370 1/2, and 10341-Unit 7), one (1) residential garage, utility closets, and common areas (i.e. pool facilities, laundry rooms, and parking areas). Converse did not access the remaining 107 residential units and three (3) remaining residential garages.

These limiting conditions are not expected to affect the findings and conclusions of this assessment.

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12.0 ADDITIONAL NON-SCOPE SERVICES

There are environmental issues outside the scope of the ASTM E1527-13 that can be assessed in connection with a commercial real estate transaction. These are dealt with as non-scope considerations since they do not typically present a Superfund Liability. The specific level of inquiry (if any) is defined in the Proposal which contains a Scope of Work. These non-scope services are very client specific and not covered by the ASTM standard. They are frequently related to the business environmental risk which is defined in the standard as "risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate…"

No non-scope issues were addressed in this report.

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13.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312.

I have the specific qualifications based on education, training and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standard and practices set forth in 40 CFR Part 312.

Spencer Wagner
Environmental Professional

This Phase I ESA was completed [by or under the supervision] of the above Environmental Professional. A complete list of preparers, and their responsibilities for this assessment, is provided in the following section (Section 14.0, List of Preparers).

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14.0 LIST OF PREPARERS

Norman S. Eke
Senior Vice President/Managing Officer

B.A., Liberal Studies, Environmental Studies Emphasis, University of California, Santa Barbara, 1988.
Cal/OSHA Certified Asbestos Consultant, #96-2093
NIOSH 582 Equivalent Training

Senior Vice President and Managing Officer of Converse's California Environmental offices. Mr. Eke has served as the Principal-in-Charge and Contract Administrator to deliver services to our public agency and private clients. Mr. Eke has 27 years of experience in the fields of Environmental Due Diligence including Phase I and Phase II Environmental Site Assessments, Asbestos surveys/specifications/abatement monitoring, Preliminary Endangerment Assessments and associated Supplemental Site Investigations and Removal Action Work Plans/Implementation, various forms of Remediation, Human Health Risk Assessment and Indoor Air Quality. Mr. Eke is the former Subcommittee Chairman for E.50-02 Real Assessment and Management of the ASTM E.50 Committee on Environmental Assessment, Risk Management, Corrective Action, which includes Phase I ESA standards (2008 to 2016).

Principal area of responsibility for this ESA report: Quality Assurance/Quality Control and Technical Review.

Michael A. Van Fleet
Senior Geologist

B.A. Earth Science, University of California, Santa Cruz, 1999
Professional Geologist; California No. 7869, Washington No. 2900

Mr. Van Fleet has over 13 years of experience working as a geologist in the state of California. The majority of his project experience has been in the areas of environmental assessment and subsequent remediation, but also includes experience in groundwater development. Mr. Van Fleet's experience includes: collection of soil matrix, soil vapor, and groundwater samples; geologic logging of earth materials; designing well completion parameters; regulatory interaction; design and operation of soil vapor and groundwater remediation systems; staff and project management; report preparation and review; and

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monitoring of contractor activities.

Principal area of responsibility for this ESA report: Client Point of Contact.

Spencer Wagner
Senior Staff Environmental Scientist

B.A., Environmental Science and Policy, California State University, Long Beach, 2006
B.A., Geography, California State University, Long Beach, 2006
40-Hour HAZWOPER Certified
Certified Wood Destroying Organism (WDO) Inspector

Mr. Wagner has over 11 years' experience conducting Phase I and II Environmental Site Assessments throughout California. Mr. Wagner has completed Phase I ESAs on undeveloped land, residential properties, commercial/retail facilities, industrial facilities, and school sites. His Phase II ESA experience includes collection of soil matrix, soil vapor, indoor air and groundwater samples, remediation system design and installation, project management, regulatory liaising, conducting/supervising field activities, and document preparation and review. Projects worked on have included residential properties, commercial warehousing sites, school sites, dry cleaning facilities, automotive service sites, metal plating facilities and multi-tenant commercial properties

Principal area of responsibility for this ESA report: Project Management, Historical Research, Regulatory Agency Interaction, Property Reconnaissance, Interviews, and Report Generation.

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15.0 REFERENCES

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Appendix A - Application for Authorization to Use

Converse Consultants

Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

Application for Authorization to Use

TO: Converse Consultants
717 South Myrtle Avenue
Monrovia, California 91016

Project Title & Date: _____

Project Address: _____

FROM: (Please identify name & address of person/entity applying for permission to use the referenced report.)

_____

_____

_____

Applicant _____ hereby applies for permission to use the referenced report in order to:

_____

_____

_____

Applicant wishes or needs to use the referenced report because:

_____

_____

_____

Applicant also understands and agrees that the referenced document is a copyrighted document and shall remain the sole property of Converse Consultants. Unauthorized use or copying of the report is strictly prohibited without the express written permission of Converse Consultants. *Applicant* understands and agrees that Converse Consultants may withhold such permission at its sole discretion, or grant such permission upon agreement to Terms and Conditions, such as the payment of a re-use fee, amongst others.

Applicant Signature: _____

Applicant Name (print): _____

Title: _____

Date: _____

Appendix B - Property Plans

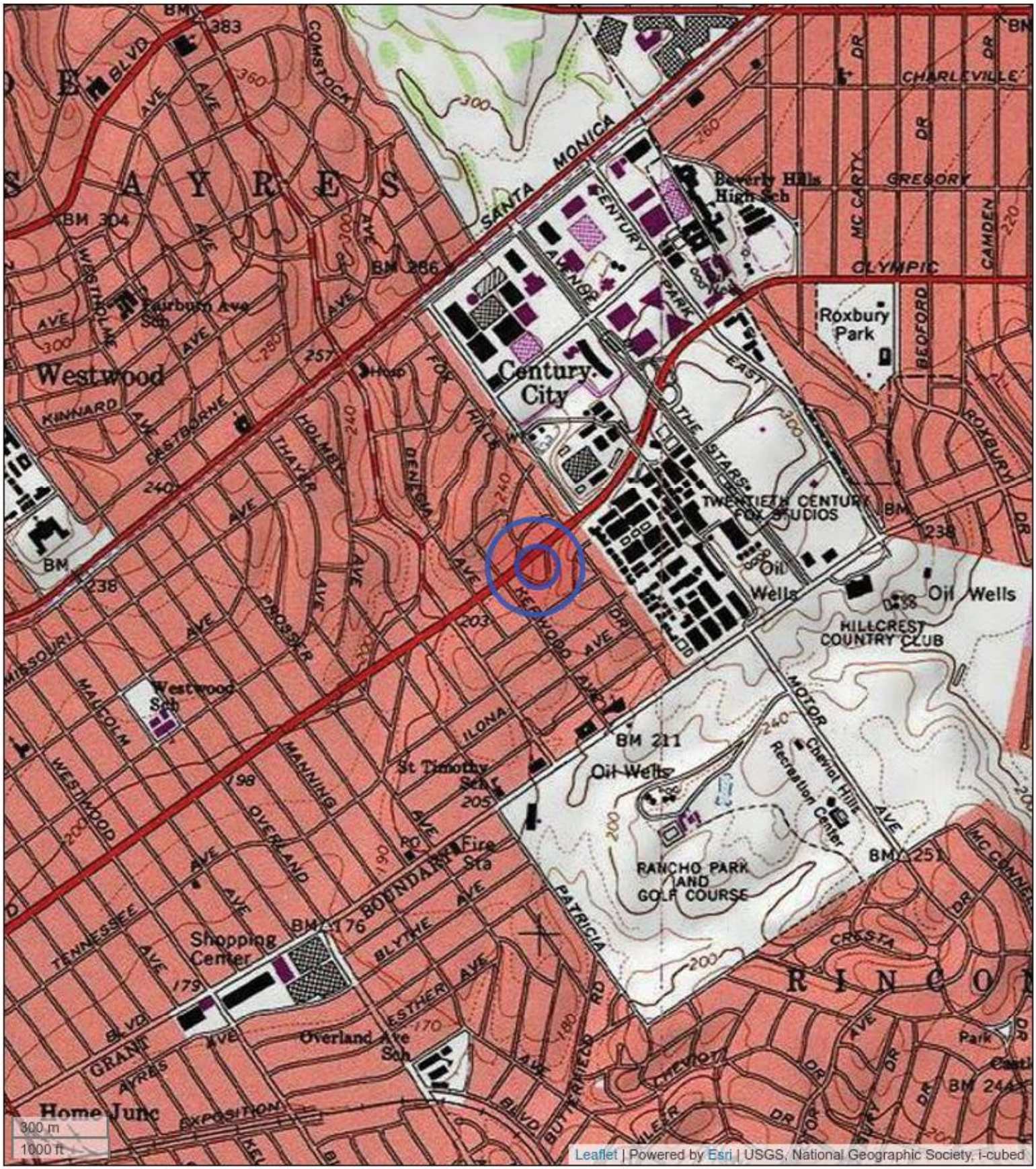


Figure 1 - Property Location Map

SBLP Century City, LLC

10330, 10340, 10341, 10344, 10360, and 10368-10384 1/2 Bellwood Avenue

Los Angeles, California

Converse Project No. 18-41-139-01

Figure 2 - Property Map

SBLP Century City, LLC

10330, 10340, 10341, 10344, 10360, and 10368-10384 1/2 Bellwood Avenue

Los Angeles, California

Converse Project No. 18-41-139-01

Appendix C - Pertinent Property Photographs

1

2

View of parking lot on north side of building.

3

4

View of typical stairway access in open-air area between buildings in apartment complex.

5

6

View of laundry room in apartment complex.

7

8

View of maintenance room and hazardous material storage.

9

10

View of pool facility located on north side of apartment complex.

11

12

View of residential bungalows (10368-10374 1/2 Bellwood Ave.).

13

14

View of typical interior of studio bungalow unit.

15

16

View of typical kitchen in one-bedroom bungalow unit.

17

18

View of typical residential garages as seen at rear of 10376-10380 Bellwood Ave. residential bungalows.

19

20

View of residential bungalows (10382-10384 1/2 Bellwood Ave.).

21

View of the residential apartment building located on the north side of Bellwood Ave. (10341

22

View of typical studio unit in 10341 Bellwood Ave. apartment building.

23

24

View of laundry room in 10341 Bellwood Ave. building.

25

26

View of western adjoining Goodwill building (former gas station) located at 10350 W. Olympic Blvd.

27

28

View of northern adjoining Smog Check (10344 1/2 W. Olympic Blvd.).

29

30

View of northeastern adjoining Courtyard By Marriott (10320 W. Olympic Blvd.).

Appendix D - Historical Information: Aerials, Maps & City Directory

HISTORICAL AERIAL REPORT

for the site:
Lathan & Watkins, LLP- Bellwood Avenue
n/a
Los Angeles, CA 90064
PO #:

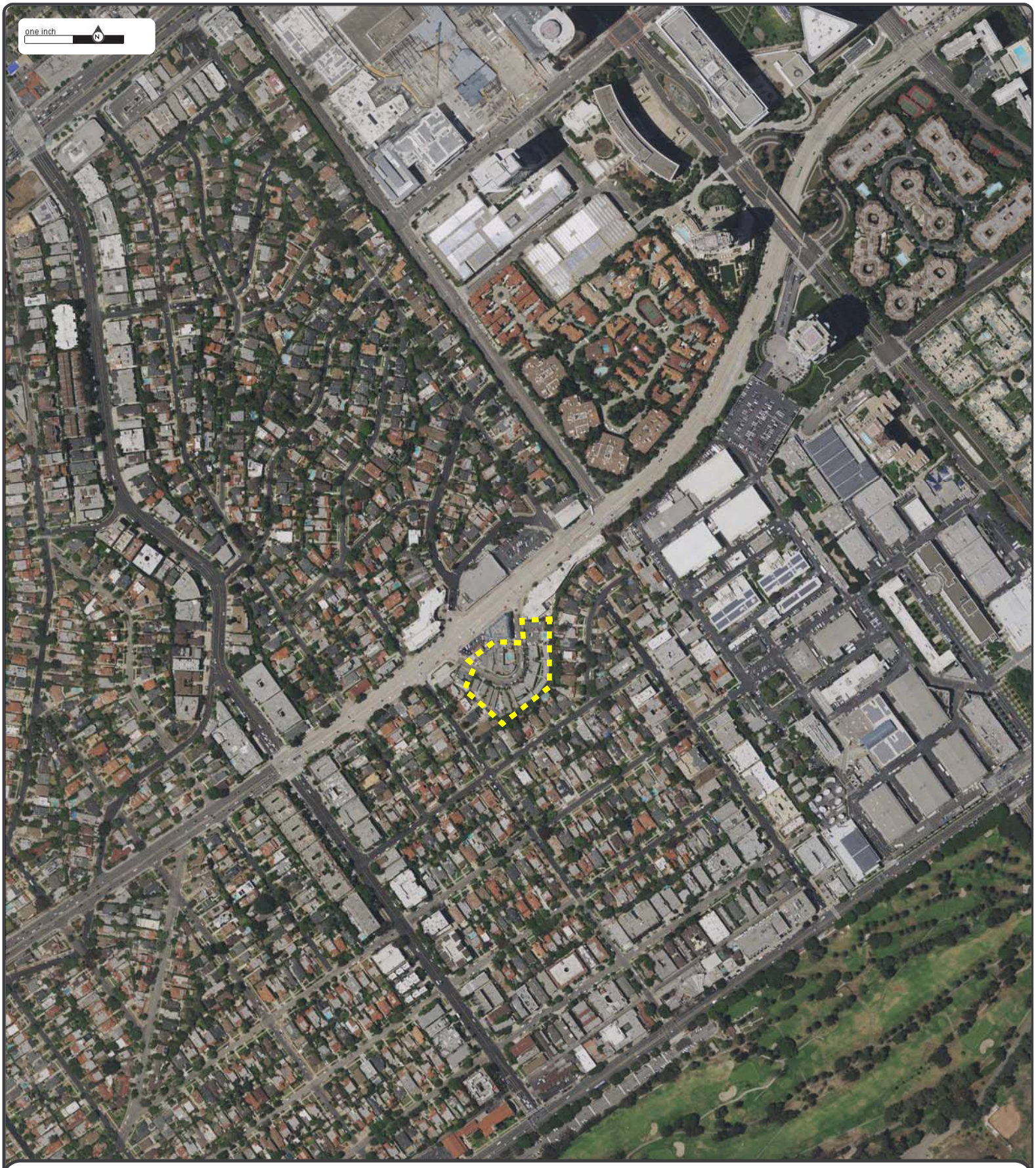
Report ID: 20180424328
Completed: 4/25/2018

ERIS Information Inc.
Environmental Risk Information Services (ERIS)
A division of Glacier Media Inc.
T: 1.866.517.5204
E: info@erisinfo.com

www.erisinfo.com

Search Results Summary

Date	Source	Scale	Comment
2016	NAIP - National Agriculture Information Program	1"=500'	
2014	NAIP - National Agriculture Information Program	1"=500'	
2012	NAIP - National Agriculture Information Program	1"=500'	
2010	NAIP - National Agriculture Information Program	1"=500'	
2005	NAIP - National Agriculture Information Program	1"=500'	
1994	USGS - US Geological Survey	1"=500'	
1989	USGS - US Geological Survey	1"=500'	
1985	NHAP - National High Altitude Photography	1"=500'	
1980	USGS - US Geological Survey	1"=500'	
1972	USGS - US Geological Survey	1"=500'	
1967	USGS - US Geological Survey	1"=500'	*BEST COPY AVAILABLE*
1960	FAIRCHILD - Private Company	1"=500'	
1952	USGS - US Geological Survey	1"=500'	
1948	ASCS - Agriculture and Soil Conservation Service	1"=500'	
1938	ASCS - Agriculture and Soil Conservation Service	1"=500'	
1928	FAIRCHILD - Private Company	1"=500'	



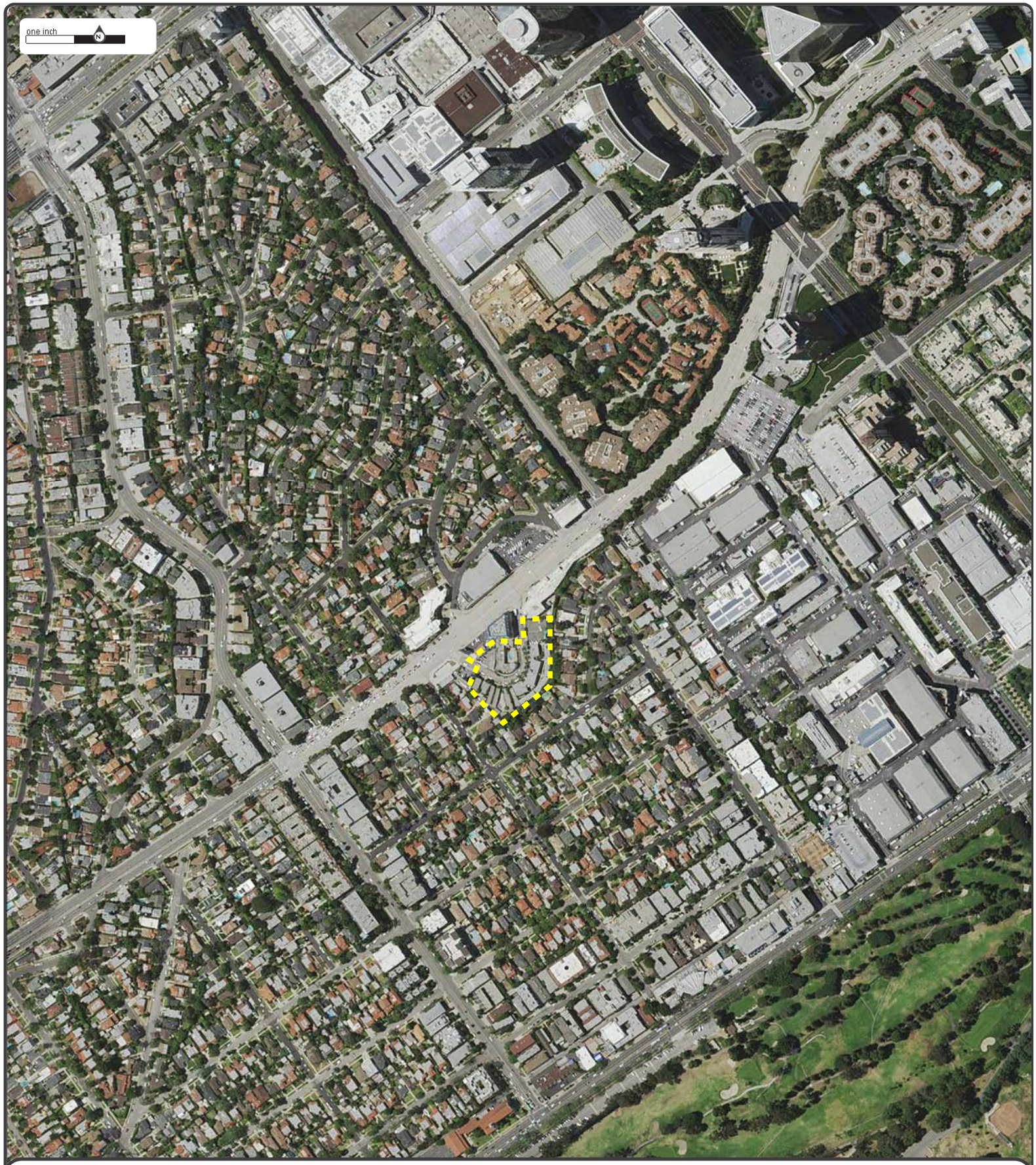
Date: 2016
Source: NAIP
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

www.erisinfo.com | 1.866.517.5204



Date: 2014
Source: NAIP
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

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ENVIRONMENTAL RISK INFORMATION SERVICES

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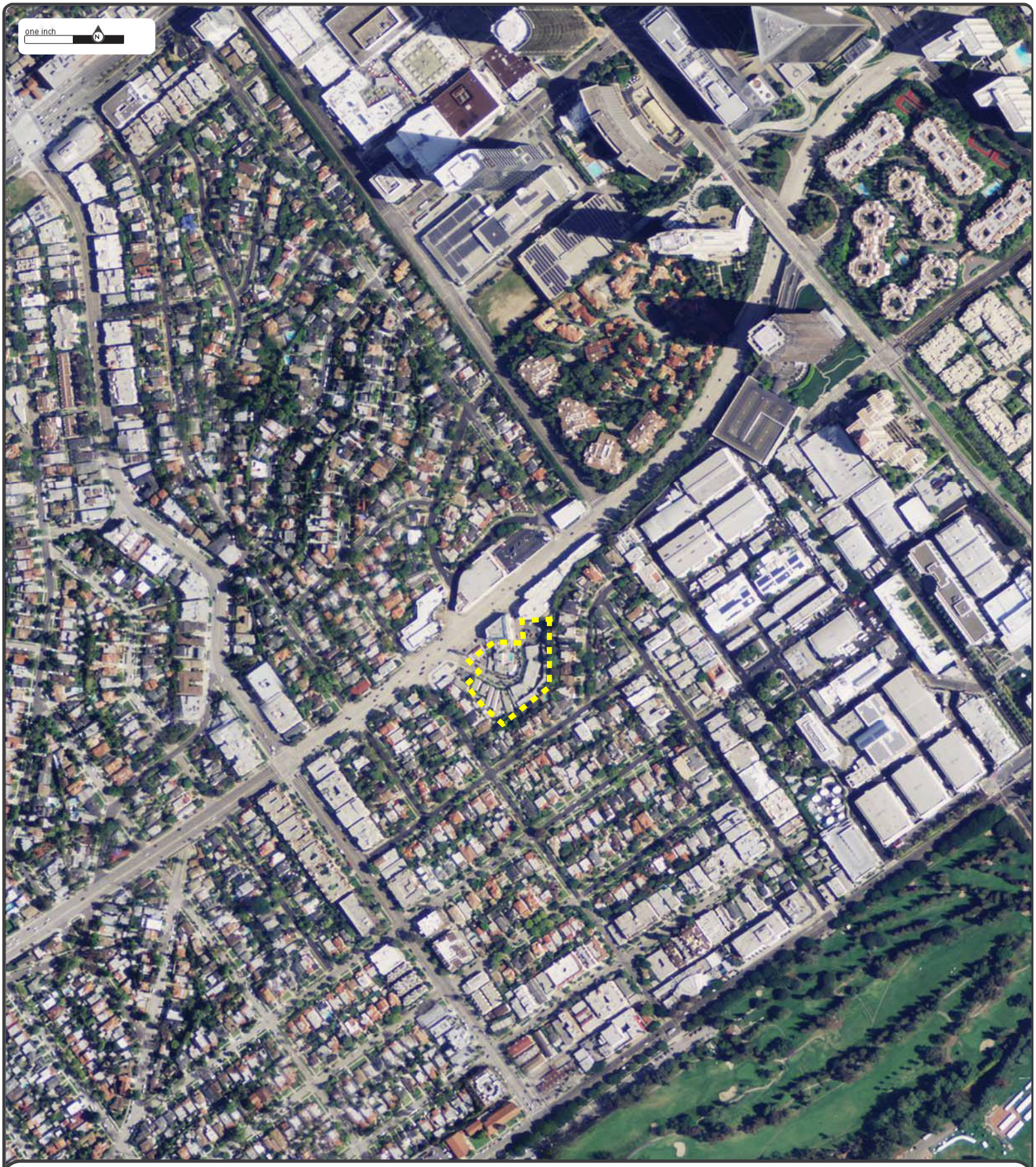

Date: 2012
Source: NAIP
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

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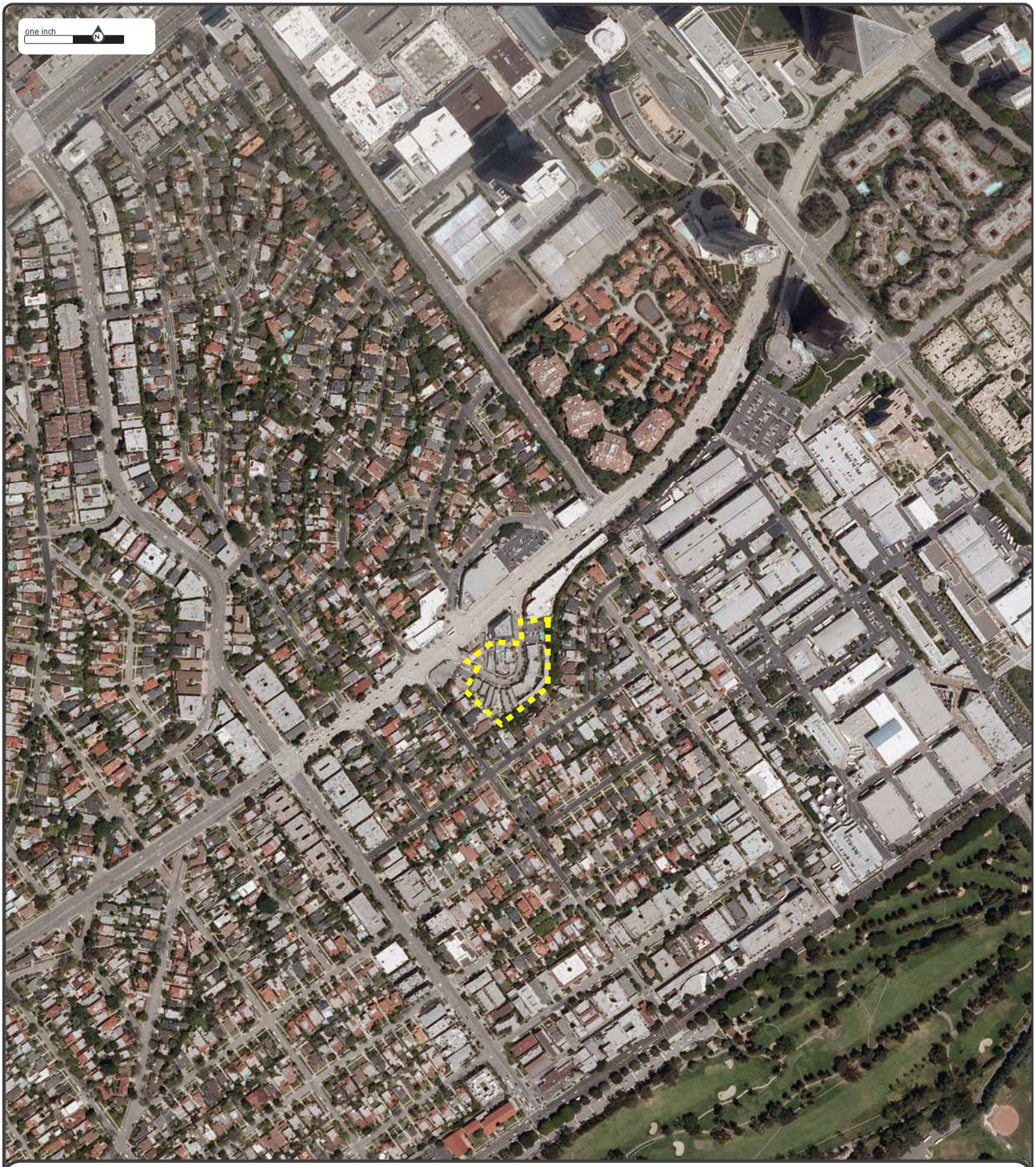

Date: 2010
Source: NAIP
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

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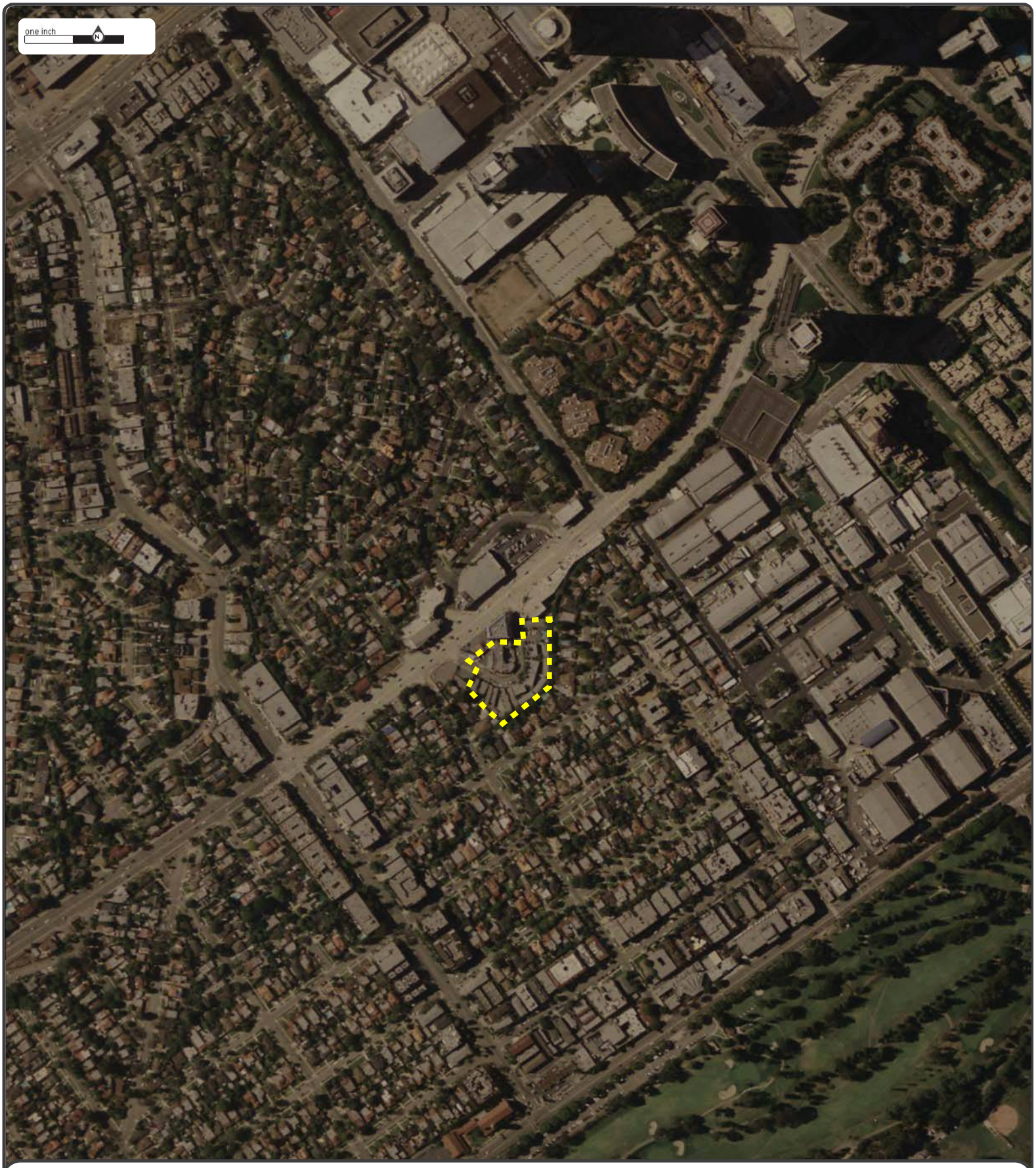
ENVIRONMENTAL RISK INFORMATION SERVICES

www.erisinfo.com | 1.866.517.5204



Date: 2005
Source: NAIP
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

www.erisinfo.com | 1.866.517.5204

Date: 1994
Source: USGS
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

www.erisinfo.com | 1.866.517.5204

Date: 1989
Source: USGS
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

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ENVIRONMENTAL RISK INFORMATION SERVICES

www.erisinfo.com | 1.866.517.5204

Date: 1985
Source: NHAP
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

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Date: 1980
Source: USGS
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

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Date: 1972
Source: USGS
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

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Date: 1967
Source: USGS
Scale: 1" to 500'
Comments: *BEST COPY AVAILABLE*

N

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

www.erisinfo.com | 1.866.517.5204

Date: 1960
Source: FAIRCHILD
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

www.erisinfo.com | 1.866.517.5204

Date: 1952
Source: USGS
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

ERIS
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Date: 1948
Source: ASCS
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

www.erisinfo.com | 1.866.517.5204

Date: 1938
Source: ASCS
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

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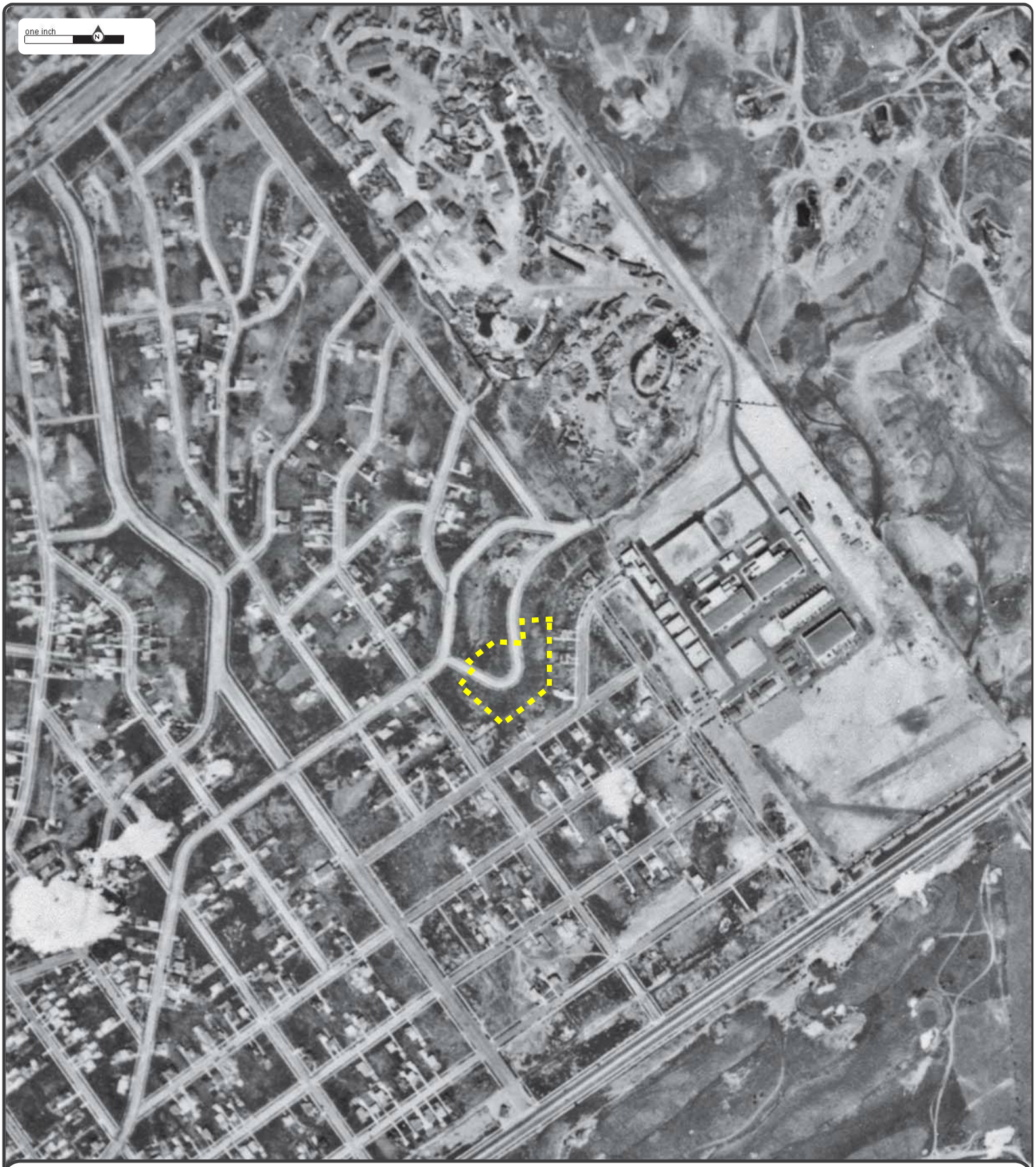

Date: 1928
Source: FAIRCHILD
Scale: 1" to 500'
Comments:

Subject: n/a Los Angeles CA
Approx Center: 34.05140 / -118.4173

N

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TOPOGRAPHIC MAP RESEARCH RESULTS

Date: 2018-05-08

Order Number: 20180424328

Site Name: Lathan & Watkins, LLP- Bellwood Avenue
Address: n/a, Los Angeles, CA, 90064

We have searched USGS collections of current topographic maps and historical topographic maps for the project property. Below is a list of maps found for the project property and adjacent area. Maps are from 7.5 and 15 minute topographic map series, if available.

Year	Map Series
2015	7.5
1995	7.5
1994	7.5
1981	7.5
1972	7.5
1966	7.5
1950	7.5
1934	7.5
1925	7.5
1921	15
1902	15
1900	15
1898	15
1896	15
1894	15

Topographic Maps included in this report are produced by the USGS and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property.

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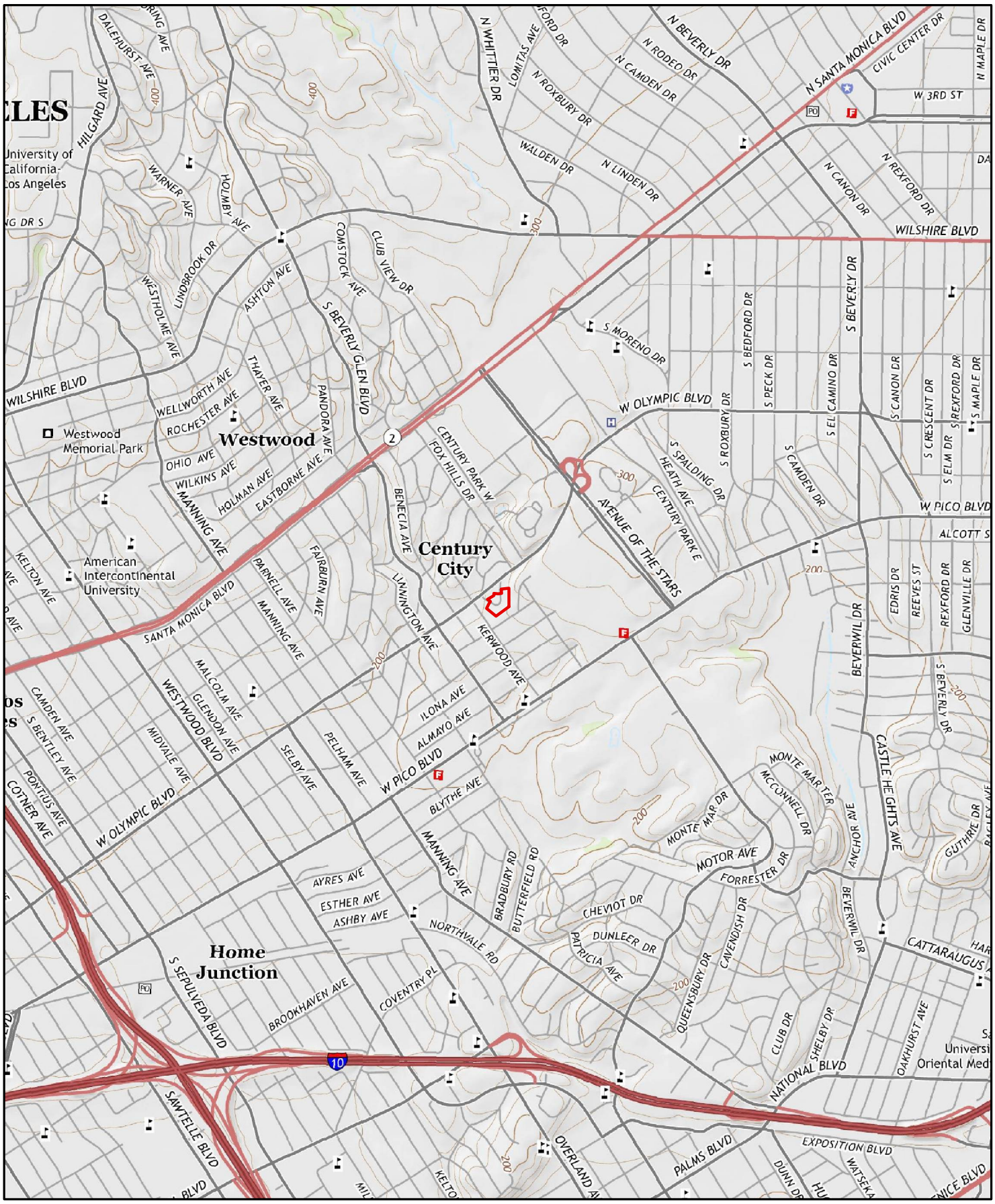
Address: 38 Lesmill Road Unit 2, Toronto, ON M3B 2T5
Phone: 1-866-517-5204 Fax: 416-447-7658
info@erisinfo.com www.erisinfo.com



2015

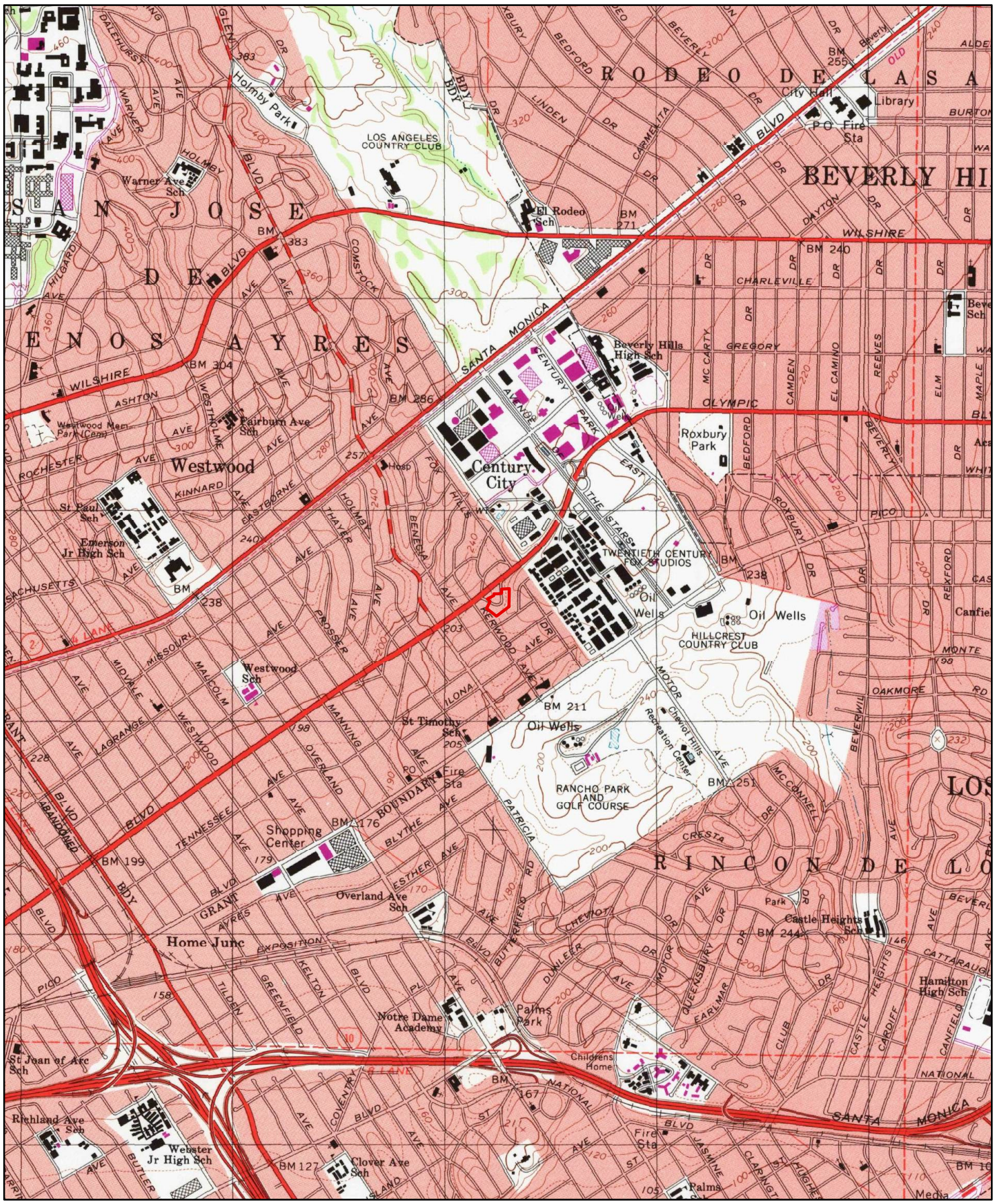
0 0.2 0.4 0.8 Miles

Order No. 20180424328

Quadrangle(s): Beverly Hills,CA

Source: USGS 7.5 Minute Topographic Map

ERIS ENVIRONMENTAL RISK INFORMATION SERVICE



1995

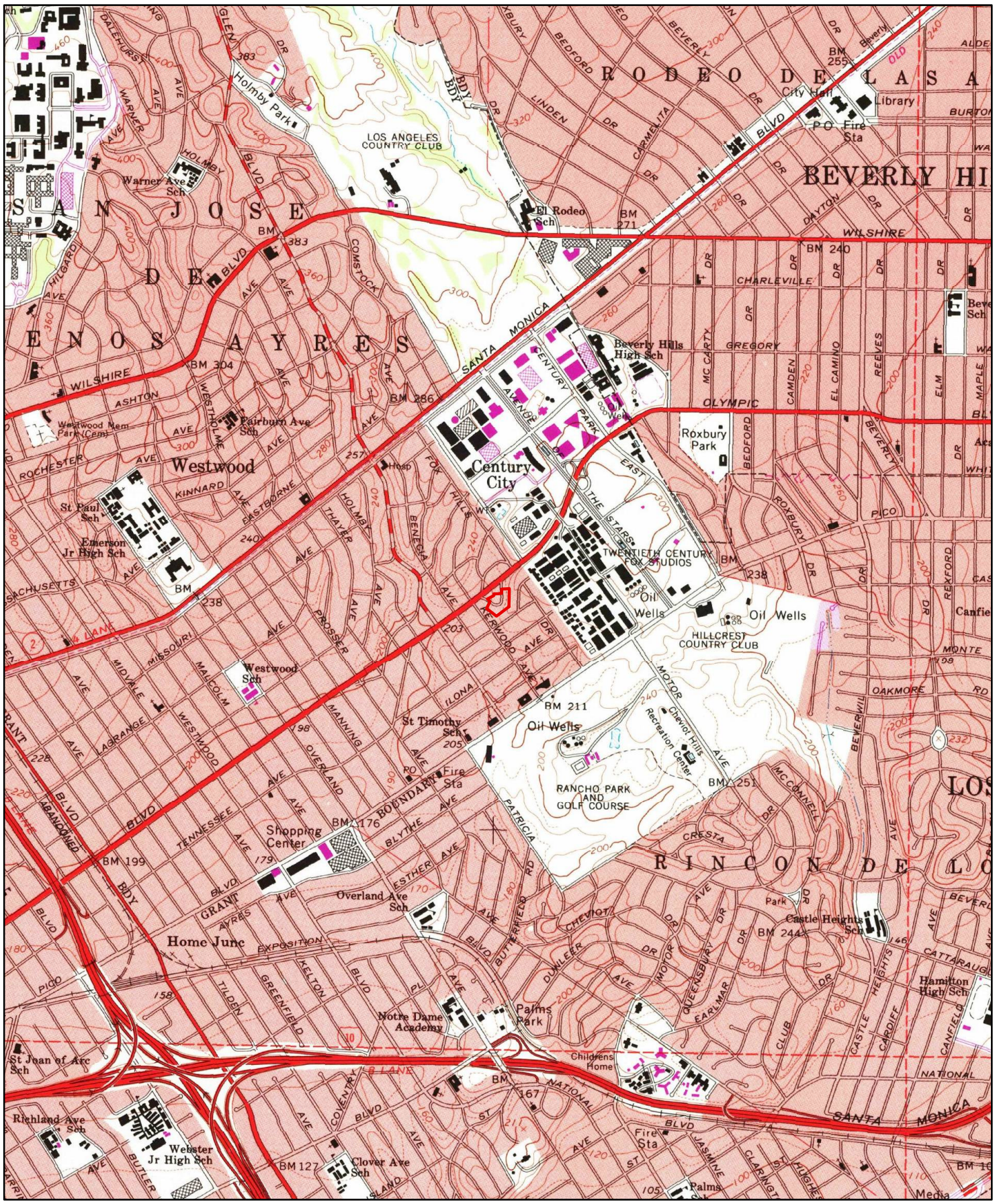
0 0.2 0.4 0.8 Miles

Order No. 20180424328

Quadrangle(s): Beverly Hills,CA

Source: USGS 7.5 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICE



1994

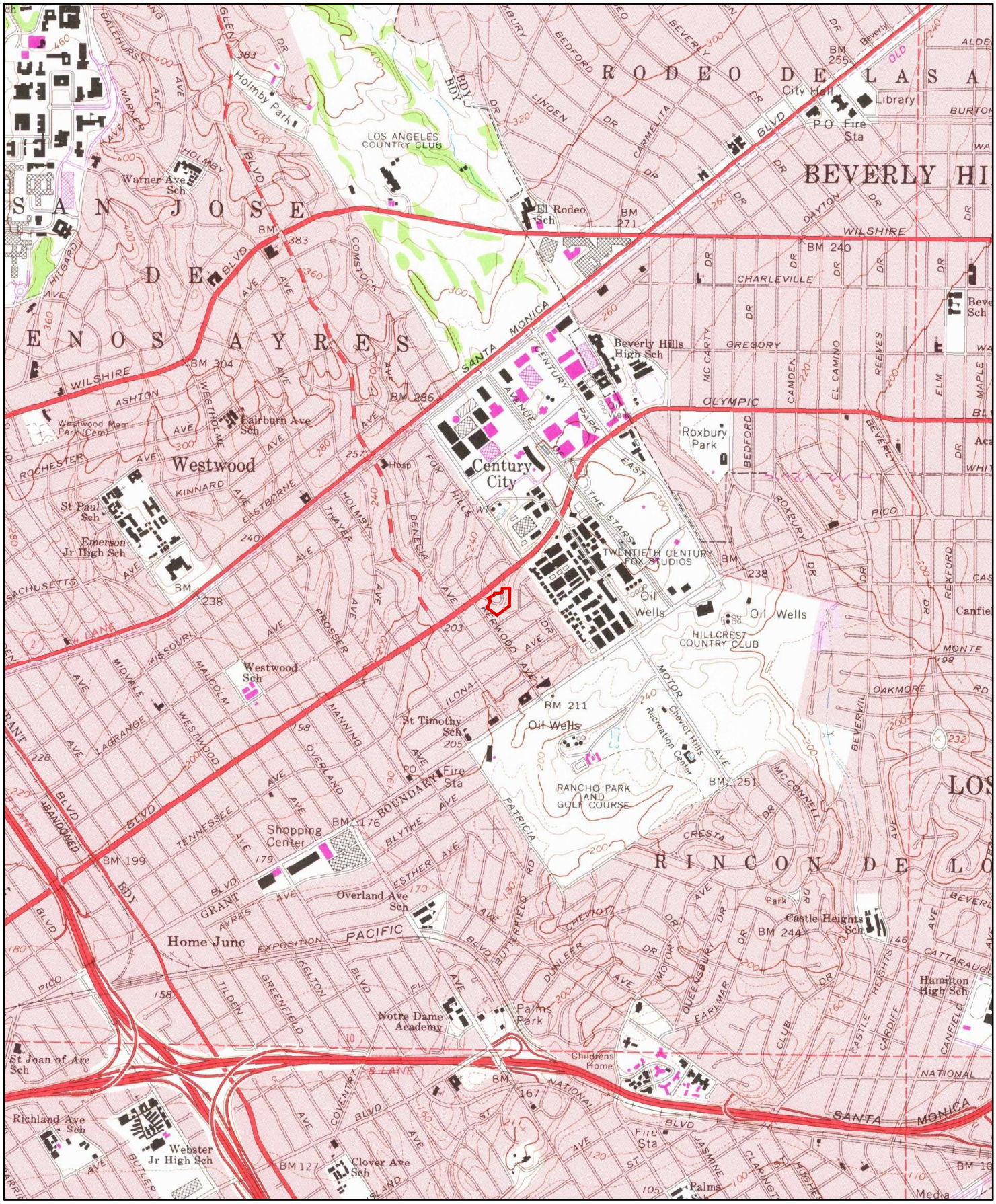
0 0.2 0.4 0.8 Miles

Order No. 20180424328

Quadrangle(s): Beverly Hills,CA

Source: USGS 7.5 Minute Topographic Map

ERIS ENVIRONMENTAL RISK INFORMATION SERVICE



1981

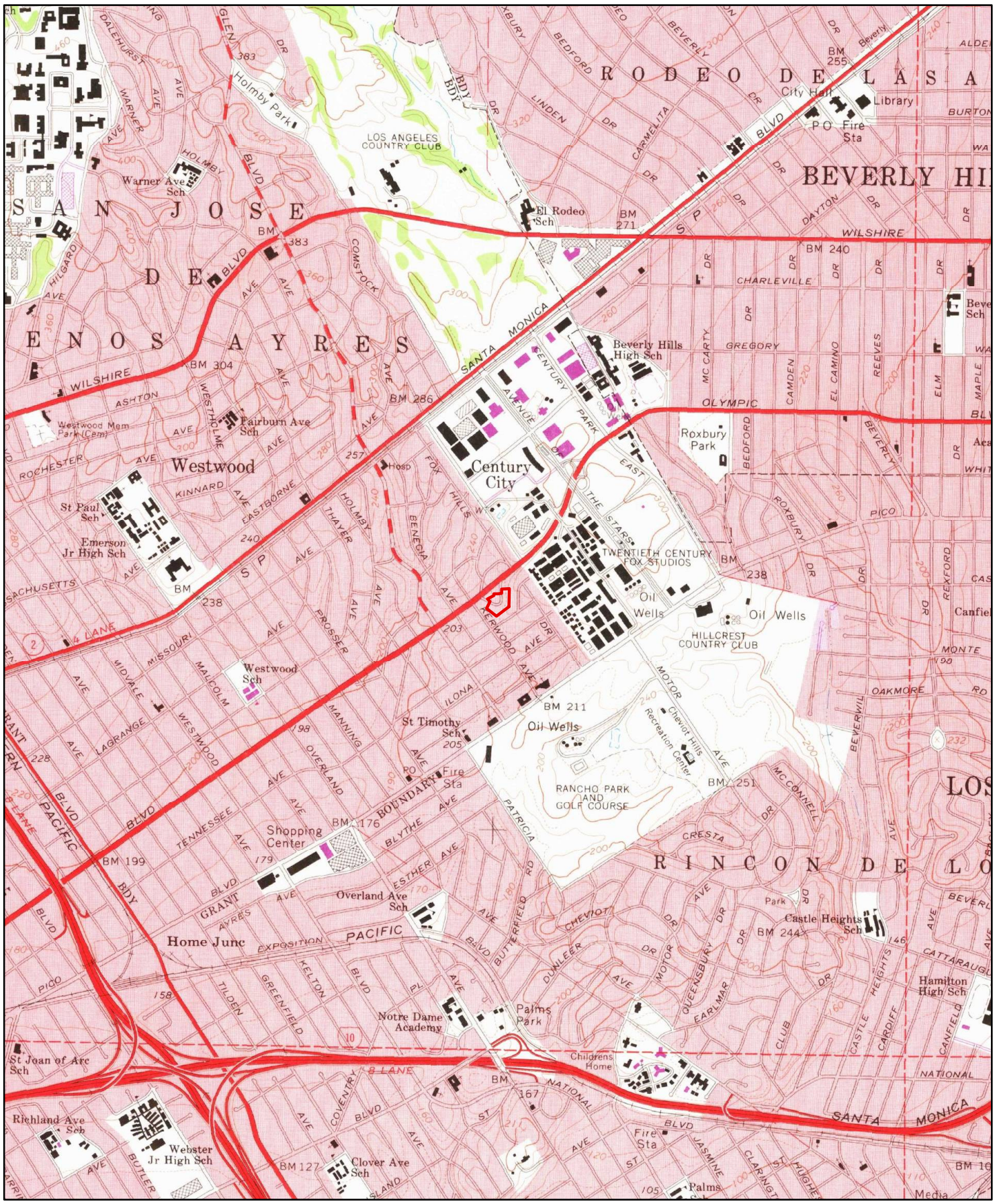
0 0.2 0.4 0.8 Miles

Order No. 20180424328

Quadrangle(s): Beverly Hills,CA

Source: USGS 7.5 Minute Topographic Map

ENVIRONMENTAL RISK INFORMATION SERVICE



1972

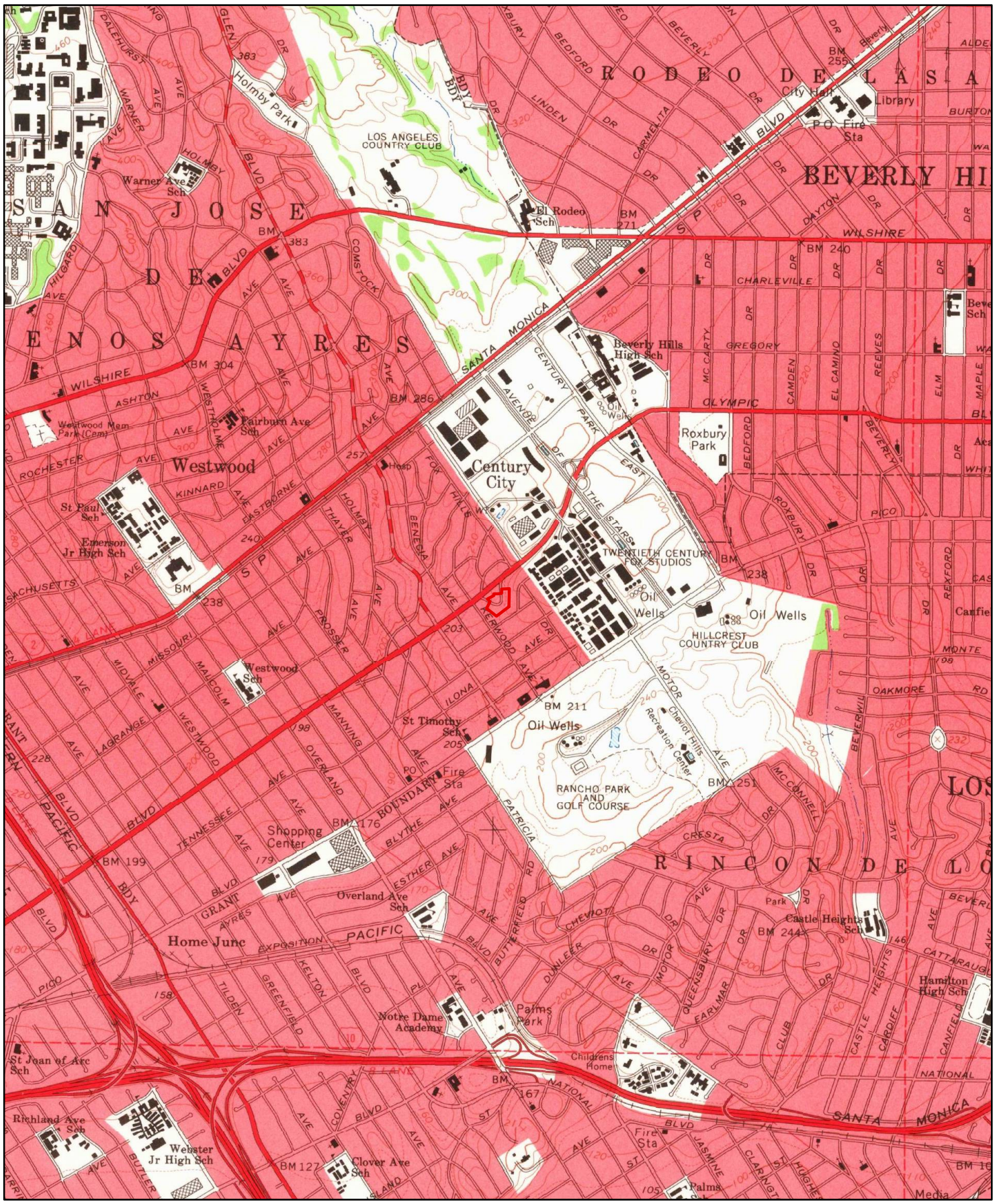
0 0.2 0.4 0.8 Miles

Order No. 20180424328

Quadrangle(s): Beverly Hills,CA

Source: USGS 7.5 Minute Topographic Map

ERIS ENVIRONMENTAL RISK INFORMATION SERVICE



1966

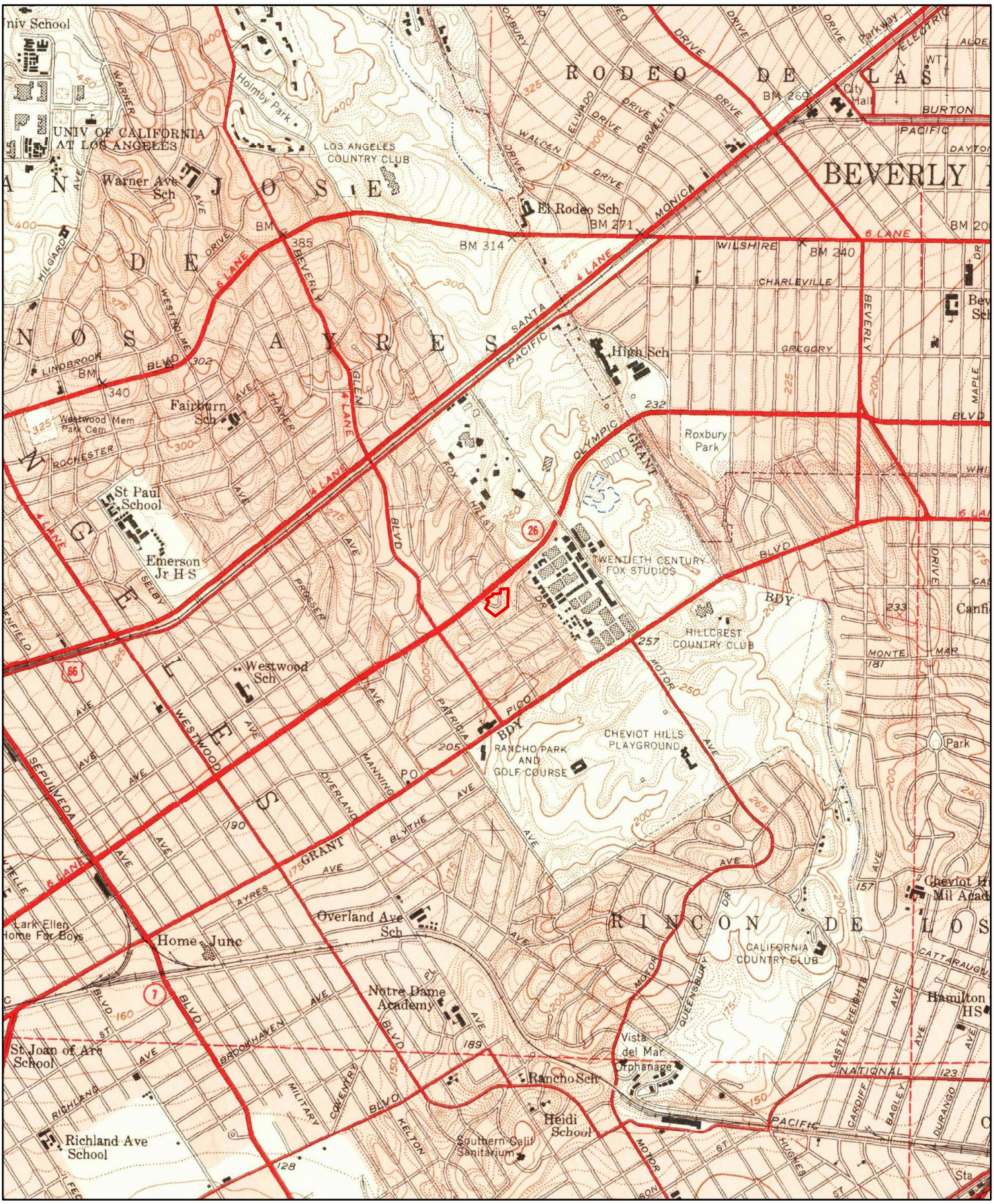
0 0.2 0.4 0.8 Miles

Order No. 20180424328

Quadrangle(s): Beverly Hills,CA

Source: USGS 7.5 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICE



1950

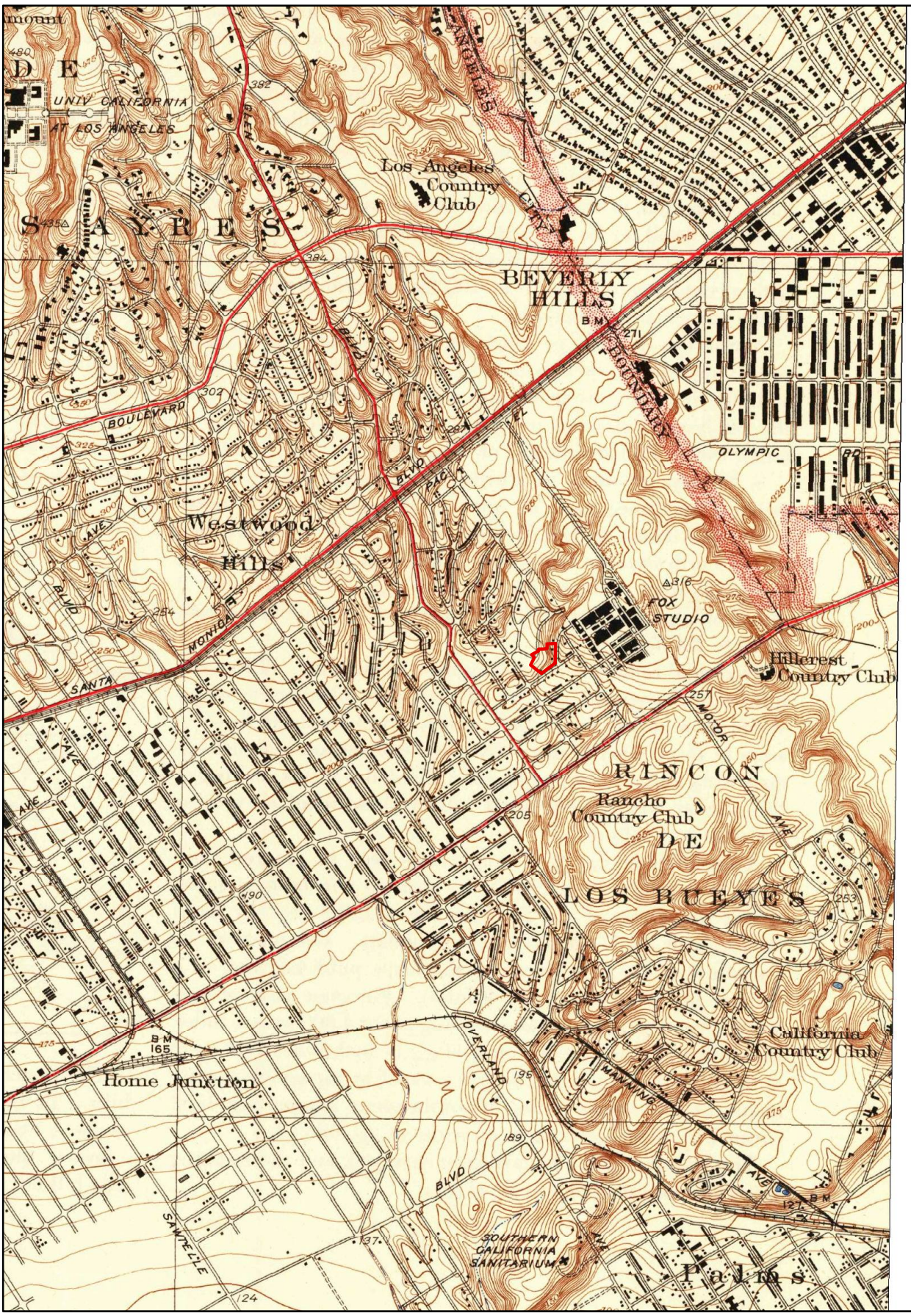
0 0.2 0.4 0.8 Miles

Order No. 20180424328

Quadrangle(s): Beverly Hills,CA

Source: USGS 7.5 Minute Topographic Map

ERIS ENVIRONMENTAL RISK INFORMATION SERVICE



1934

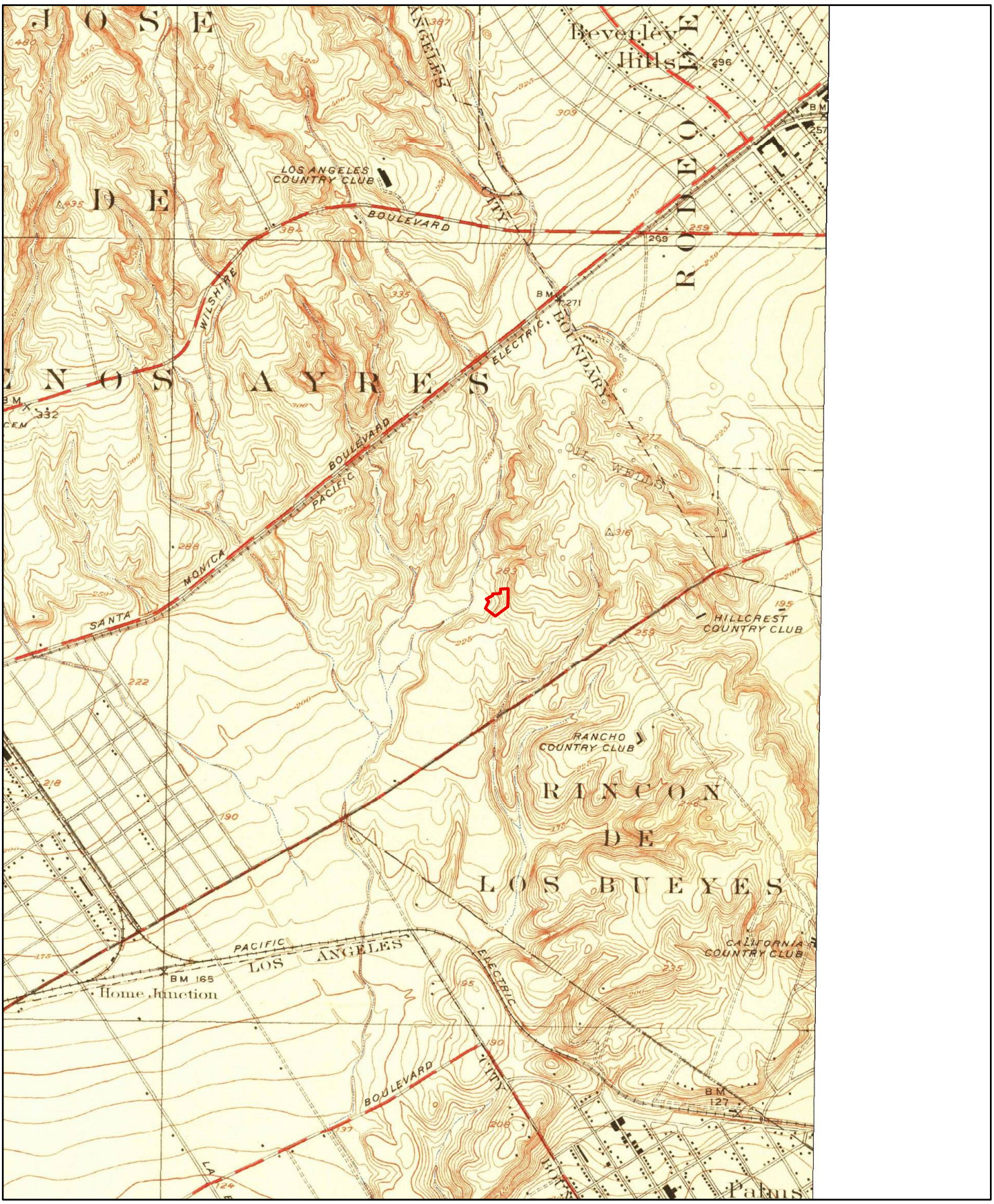
Miles
0 0.2 0.4 0.8

Order No. 20180424328

Quadrangle(s): Sawtelle,CA

Source: USGS 7.5 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICE



1925

Miles
0 0.2 0.4 0.8

Order No. 20180424328

Quadrangle(s): Sawtelle,CA

Source: USGS 7.5 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICE

1921

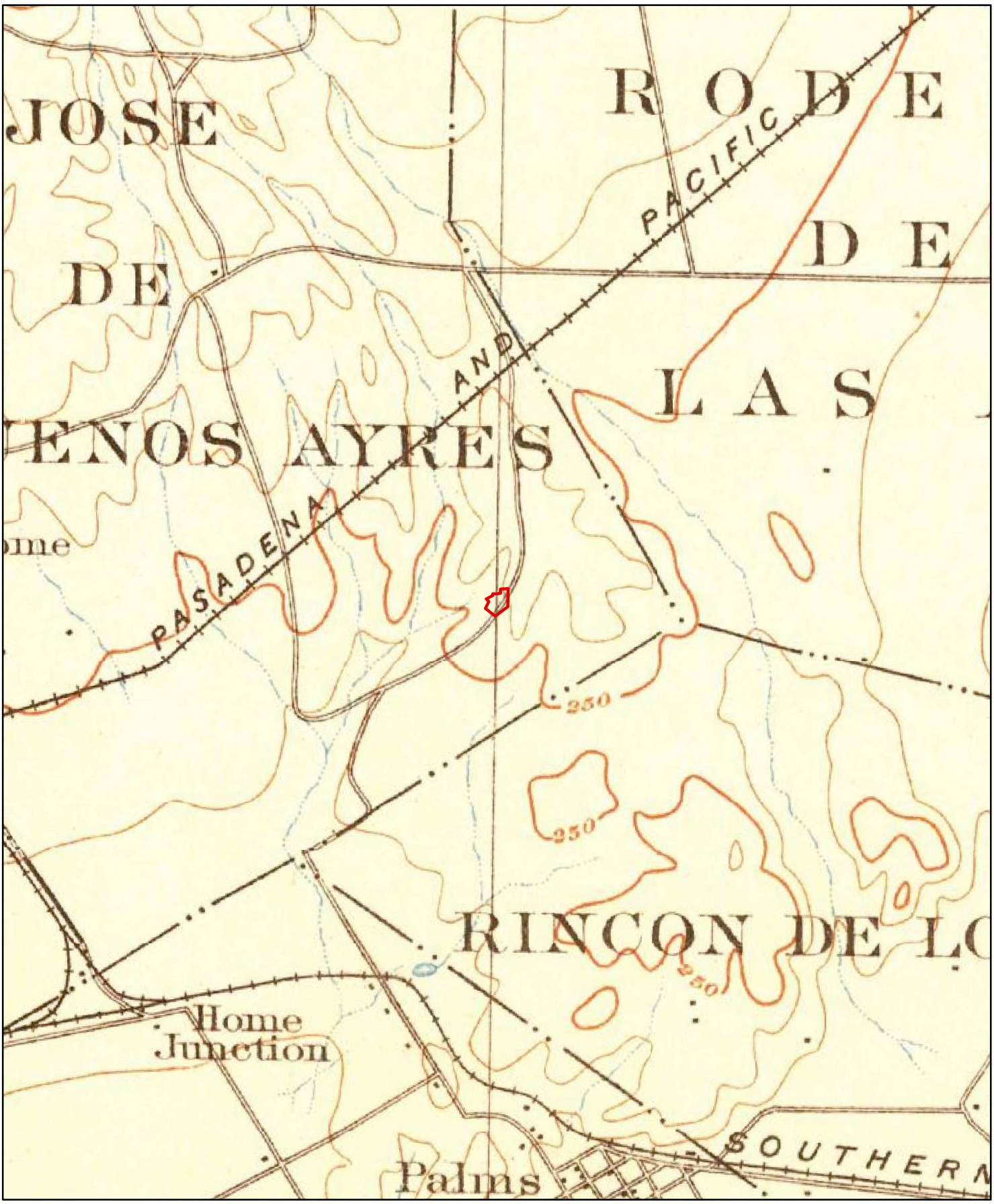
0 0.2 0.4 0.8 Miles

Order No. 20180424328

Quadrangle(s): Santa Monica,CA

Source: USGS 15 Minute Topographic Map

ERIS ENVIRONMENTAL RISK INFORMATION SERVICE



1902

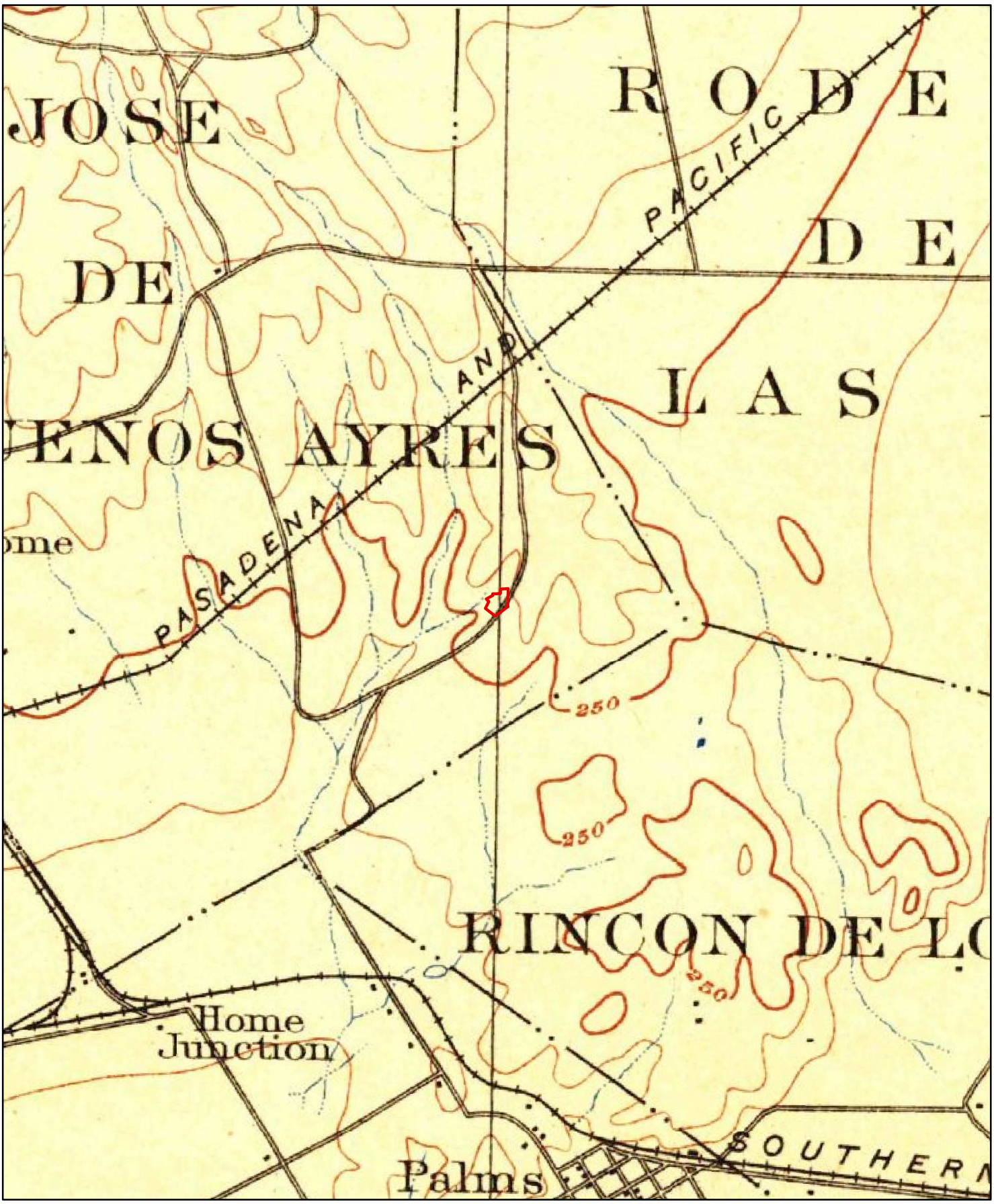
0 0.2 0.4 0.8 Miles

Order No. 20180424328

Quadrangle(s): Santa Monica,CA

Source: USGS 15 Minute Topographic Map

ERIS ENVIRONMENTAL RISK INFORMATION SERVICE



1900

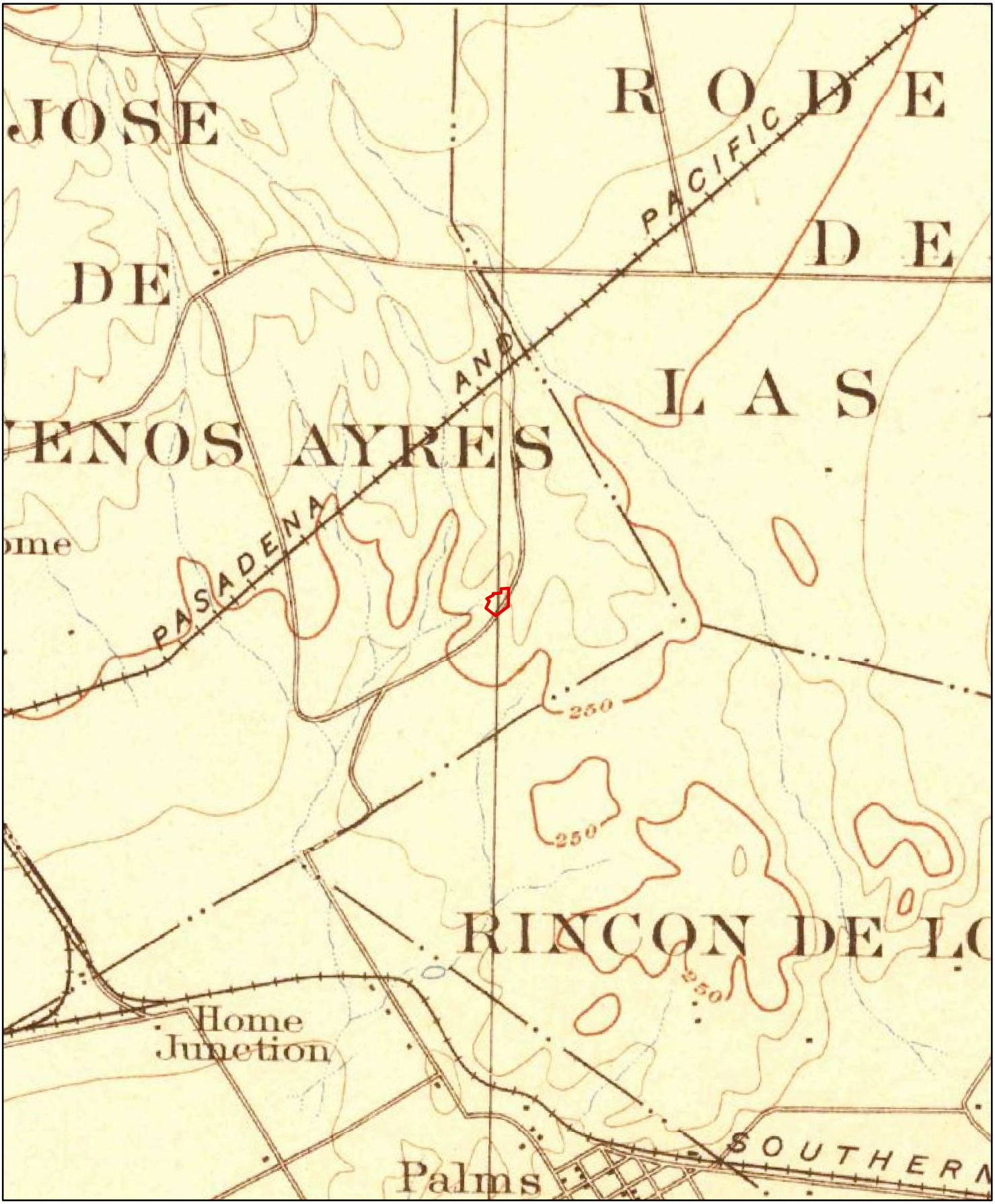
0 0.2 0.4 0.8 Miles

Order No. 20180424328

Quadrangle(s): Los Angeles,CA

Source: USGS 15 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICE



1898

0 0.2 0.4 0.8 Miles

Order No. 20180424328

Quadrangle(s): Santa Monica,CA

Source: USGS 15 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICE

1896

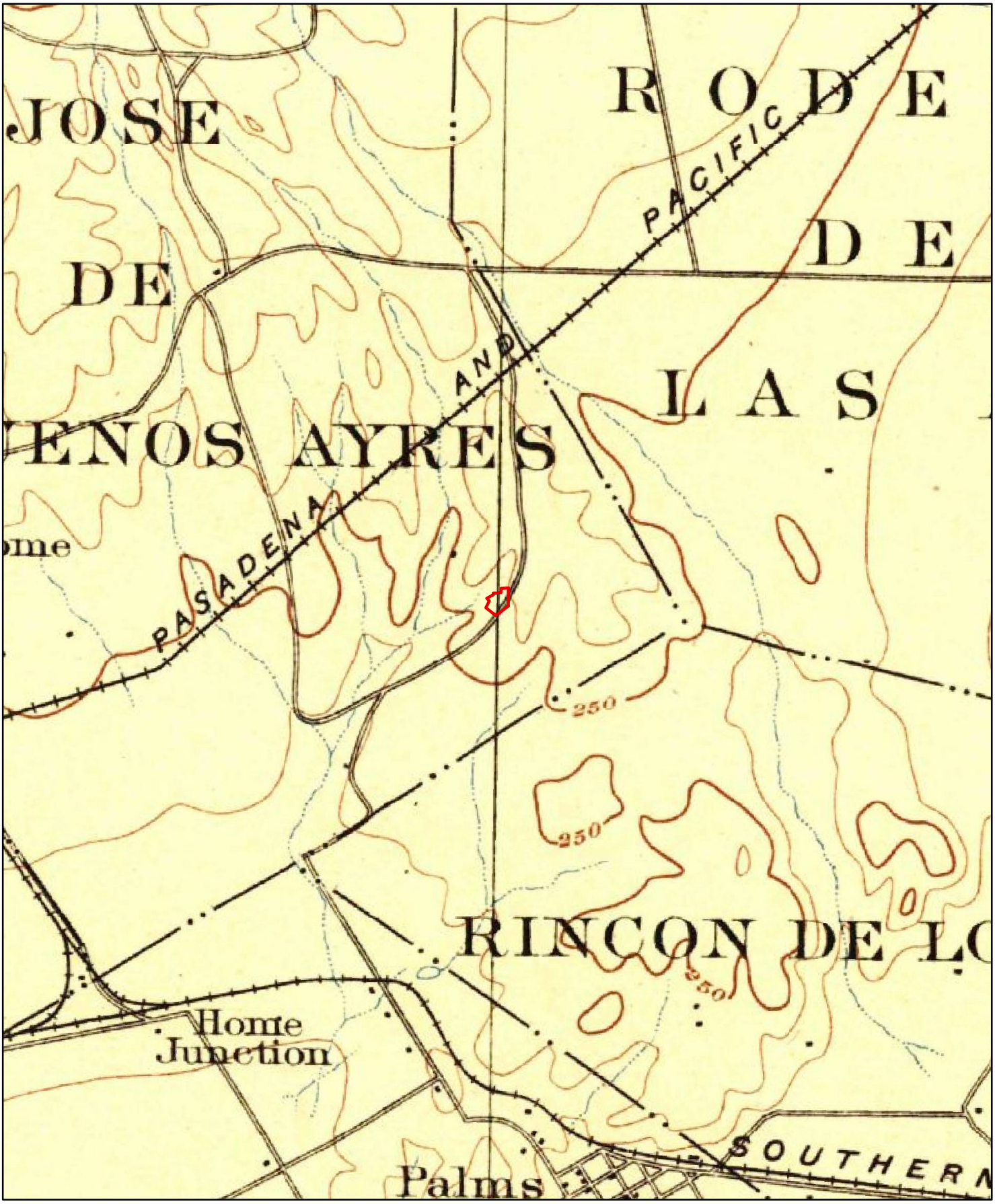
0 0.2 0.4 0.8 Miles

Order No. 20180424328

Quadrangle(s): Santa Monica,CA

Source: USGS 15 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICE



1894

0 0.2 0.4 0.8 Miles

Order No. 20180424328

Quadrangle(s): Los Angeles,CA

Source: USGS 15 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICE

FIRE INSURANCE MAP RESEARCH RESULTS

Date: 5/8/2018

Listed below, please find the results of our search for historic fire insurance maps from our in-house collection, performed in conjunction with your ERIS report.

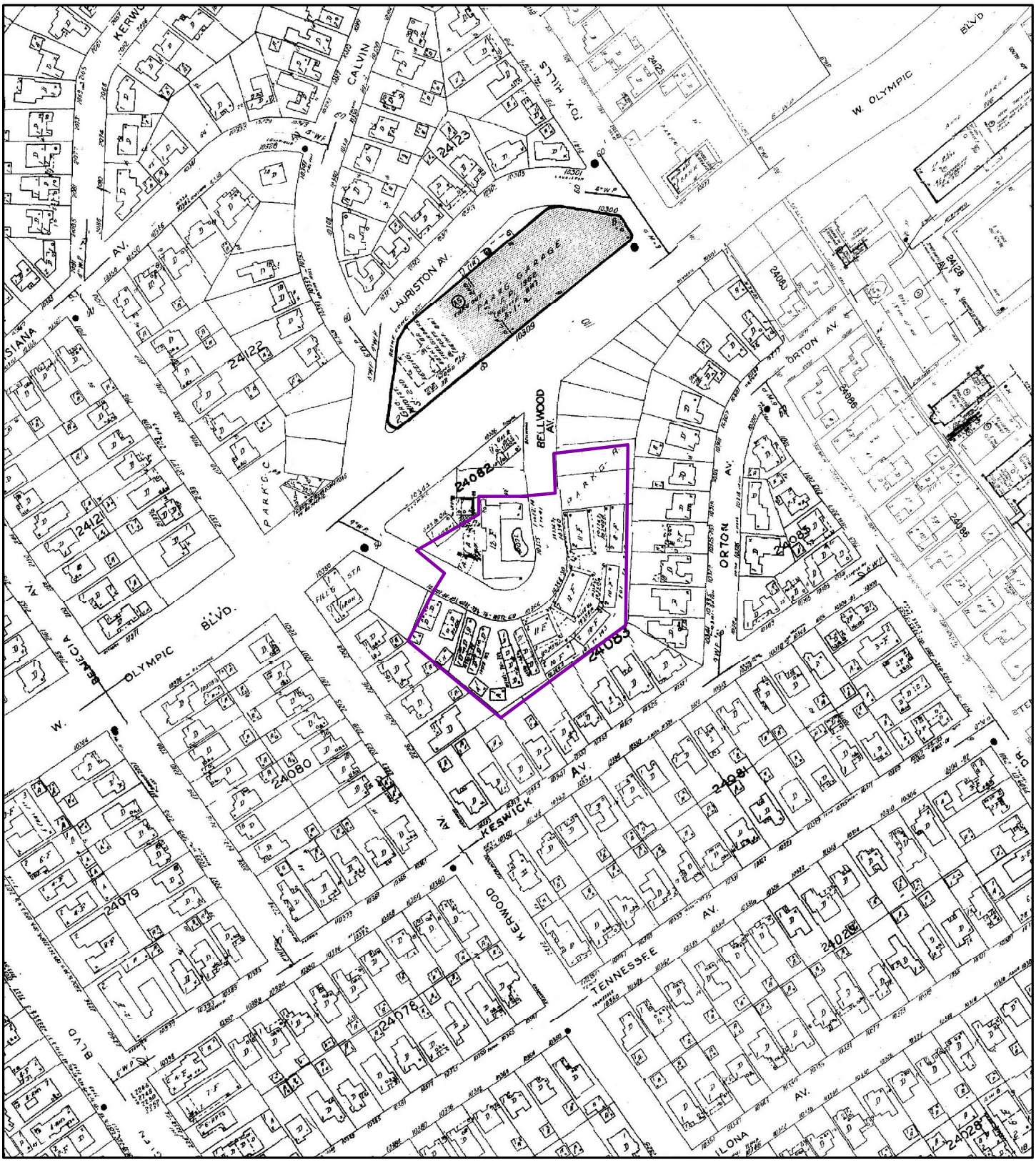
Order Number: 20180424328
Site Name: Lathan & Watkins, LLP- Bellwood Avenue
Address: n/a, Los Angeles, CA, 90064

Date	City	State	Volume	Sheet Number(s)
1969	Los Angeles	California	24	2407,2408,2414
1950	Los Angeles	California	24	2407,2408,2414
1926	Los Angeles	California	24	2407,2408,2414

Individual Fire Insurance Maps for the subject property and/or adjacent sites are included with the ERIS environmental database report to be used for research purposes only and cannot be resold for any other commercial uses other than for use in a Phase I environmental assessment.

Address: 38 Lesmill Rd Unit 2, Toronto, ON M3B 2T5
Phone: 1-866-517-5204 Fax:416-447-7658
info@erisinfo.com • www.erisinfo.com

Fire Insurance Map

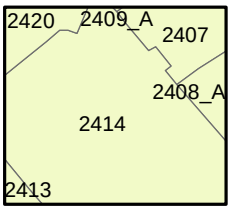


1969

Address: n/a, Los Angeles, CA, 90064

0 100 200 400 600 800
Feet

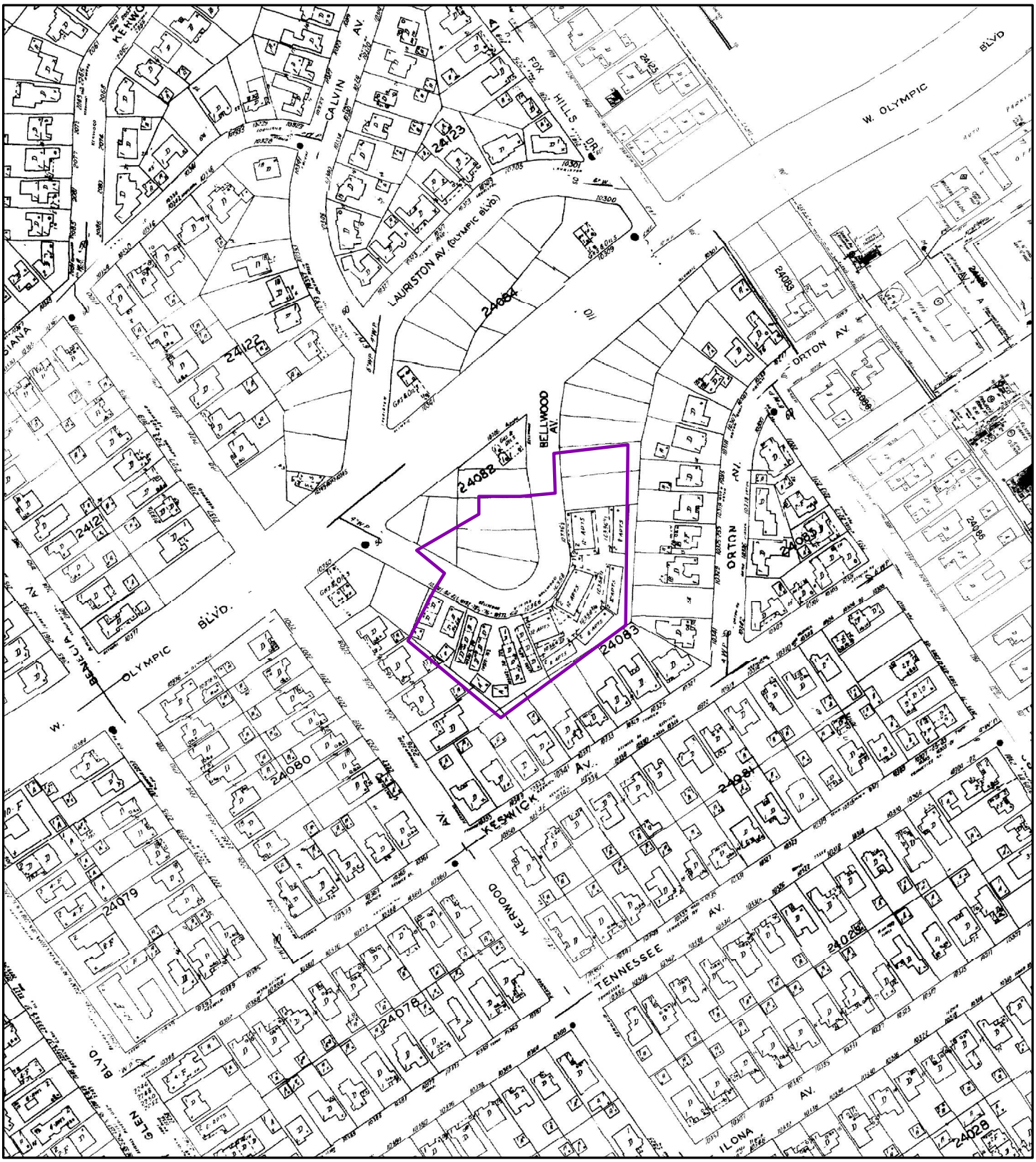
Order Number 20180424328



Map sheet(s):
Volume 24:2407,2408,2414;

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Fire Insurance Map

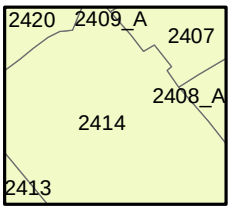


1950

Address: n/a, Los Angeles, CA, 90064

0 100 200 400 600 800
Feet

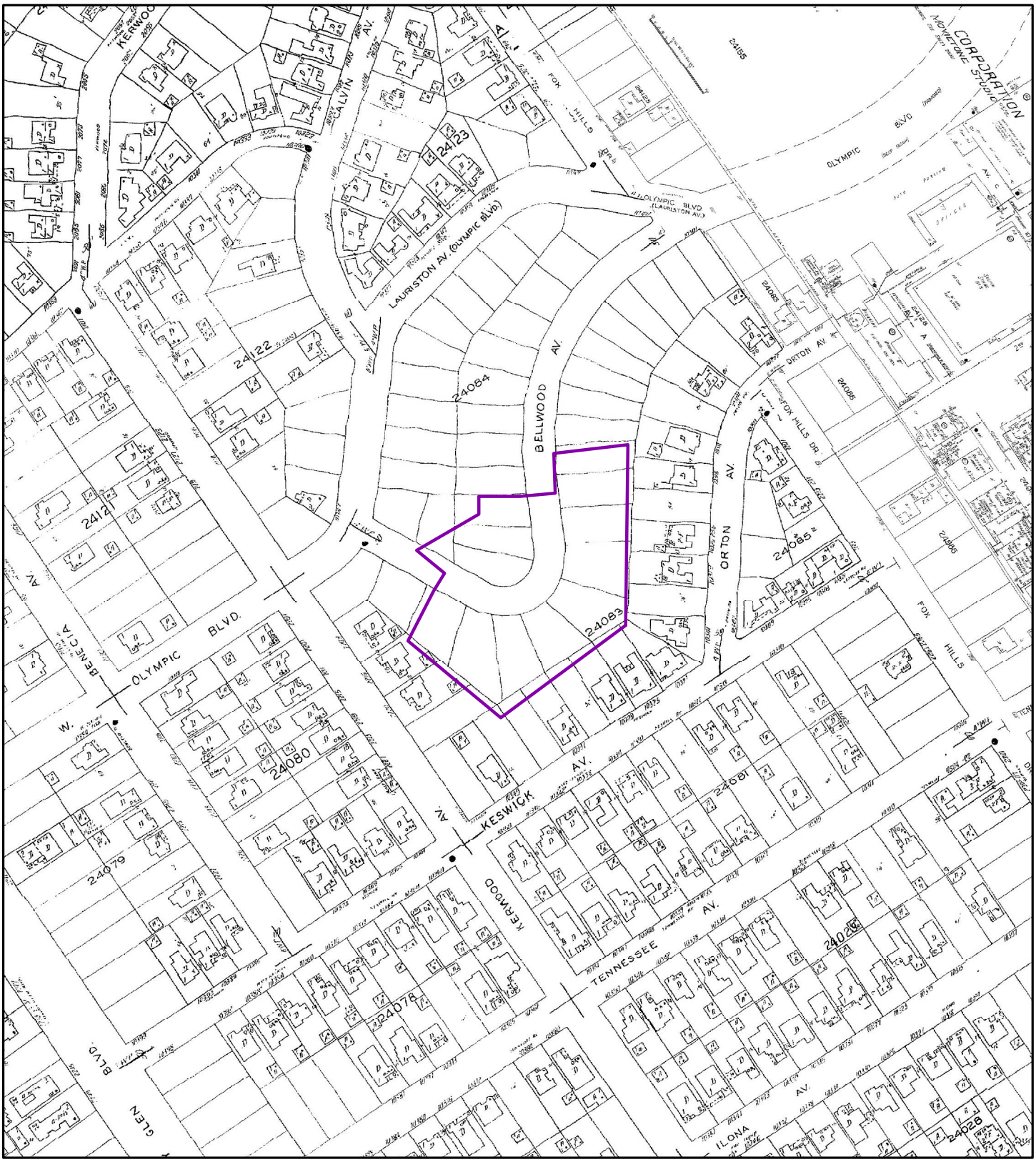
Order Number 20180424328



Map sheet(s):
Volume 24:2407,2408,2414;

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Fire Insurance Map

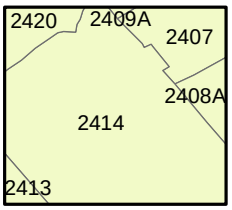


1926

Address: n/a, Los Angeles, CA, 90064

0 100 200 400 600 800
Feet

Order Number 20180424328



Map sheet(s):
Volume 24:2407,2408,2414;

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Appendix E - Regulatory Database Report

DATABASE REPORT

Project Property:	*Lathan & Watkins, LLP- Bellwood Avenue* *n/a* *Los Angeles CA 90064*
Project No:	*18-41-139-01*
Report Type:	*Database Report*
Order No:	*20180424328*
Requested by:	*Converse Consultants*
Date Completed:	*May 8, 2018*

Environmental Risk Information Services
A division of Glacier Media Inc.
P: 1.866.517.5204
E: info@erisinfo.com

www.erisinfo.com

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Executive Summary: Site Report Summary - Surrounding Properties....9
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Executive Summary

Property Information:

Project Property:	*Lathan & Watkins, LLP- Bellwood Avenue* *n/a Los Angeles CA 90064*
Project No:	*18-41-139-01*

Coordinates:

Latitude:	*34.051385*
Longitude:	*-118.417427*
UTM Northing:	*3,768,759.61*
UTM Easting:	*369,177.56*
UTM Zone:	*UTM Zone 11S*

Elevation:	*228 FT*

Order Information:

Order No:	*20180424328*
Date Requested:	*April 24, 2018*
Requested by:	*Converse Consultants*
Report Type:	*Database Report*

Historicals/Products:

Aerial Photographs	*Historical Aerials (Boundaries)*
City Directory Search	*CD - 2 Street Search*
ERIS Xplorer	*ERIS Xplorer - Interactive Viewer*
Excel Add-On	*Excel Add-On*
Fire Insurance Maps	*US Fire Insurance Maps*
Physical Setting Report (PSR)	*PSR*
Topographic Map	*Topographic Maps*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	.5	0	0	0	0	-	0
SEMS	Y	.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	.5	0	0	0	0	-	0
CERCLIS	Y	.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	.5	0	0	0	0	-	0
RCRA LQG	Y	.25	0	0	0	-	-	0
RCRA SQG	Y	.25	0	1	0	-	-	1
RCRA CESQG	Y	.25	0	0	0	-	-	0
RCRA NON GEN	Y	.25	0	0	0	-	-	0
FED ENG	Y	.5	0	0	0	0	-	0
FED INST	Y	.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	.5	0	0	0	0	-	0
FEMA UST	Y	.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
State								
RESPONSE	Y	1	0	0	0	0	0	0
ENVIROSTOR	Y	1	0	0	0	0	1	1
DELISTED ENVS	Y	1	0	0	0	0	0	0
SWF/LF	Y	.5	0	0	0	0	-	0
HWP	Y	1	0	0	0	0	0	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
LDS	Y	.5	0	0	0	0	-	0
LUST	Y	.5	0	0	0	0	-	0
DELISTED LST	Y	.5	0	0	0	0	-	0
UST	Y	.25	0	0	1	-	-	1
UST CLOSURE	Y	.5	0	0	0	0	-	0
HHSS	Y	.25	0	2	0	-	-	2
AST	Y	.25	0	0	0	-	-	0
DELISTED TNK	Y	.25	0	1	1	-	-	2
CERS TANK	Y	.25	0	0	0	-	-	0
DELISTED HAZ	Y	.5	0	0	0	2	-	2
LUR	Y	.5	0	0	0	0	-	0
HLUR	Y	.5	0	0	0	0	-	0
DEED	Y	.5	0	0	0	0	-	0
VCP	Y	.5	0	0	0	1	-	1
CLEANUP SITES	Y	.5	0	0	0	0	-	0
CERS HAZ	Y	.125	0	2	-	-	-	2
DELISTED CTNK	Y	.25	0	0	0	-	-	0
HIST TANK	Y	.25	0	2	0	-	-	2
Tribal								
INDIAN LUST	Y	.5	0	0	0	0	-	0
INDIAN UST	Y	.25	0	0	0	-	-	0
DELISTED ILST	Y	.5	0	0	0	0	-	0
DELISTED IUST	Y	.25	0	0	0	-	-	0
County								
DELISTED COUNTY	Y	.25	0	0	0	-	-	0
BURBANK CUPA	Y	.25	0	0	0	-	-	0
ELSEGUNDO UST	Y	.25	0	0	0	-	-	0
SANTAFESP UST	Y	.25	0	0	0	-	-	0
SANTAMON AST	Y	.25	0	0	0	-	-	0
SANTAMON CUPA	Y	.25	0	0	0	-	-	0
SANTAMON HAZ	Y	.25	0	0	0	-	-	0
SANTAMON HW	Y	.25	0	0	0	-	-	0
SANTA MONICA UST	Y	.25	0	0	0	-	-	0
TORRANCE UST	Y	.25	0	0	0	-	-	0
VERNON CUPA	Y	.25	0	0	0	-	-	0
VERNON UST	Y	.25	0	0	0	-	-	0
LA HMS	Y	.25	0	0	0	-	-	0
LA LONGB UST	Y	.25	0	0	0	-	-	0
LA SWF	Y	.5	0	0	0	0	-	0
UST LA CITY	Y	.25	0	2	0	-	-	2

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
AST LA CITY	Y	.25	0	0	0	-	-	0
LA CITY HAZMAT	Y	.25	0	6	0	-	-	6

Additional Environmental Records

Federal

FINDS/FRS	Y	PO	0	-	-	-	-	0
TRIS	Y	PO	0	-	-	-	-	0
HMIRS	Y	.125	0	0	-	-	-	0
NCDL	Y	PO	0	-	-	-	-	0
ODI	Y	.5	0	0	0	0	-	0
IODI	Y	.5	0	0	0	0	-	0
TSCA	Y	.125	0	0	-	-	-	0
HIST TSCA	Y	.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	.25	0	0	0	-	-	0
DELISTED FED DRY	Y	.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	.25	0	0	0	-	-	0
ALT FUELS	Y	.25	0	0	0	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
SSTS	Y	.25	0	0	0	-	-	0
PCB	Y	.5	0	0	0	0	-	0

State

INSP COMP ENF	Y	1	0	0	0	0	0	0
CDL	Y	.125	0	0	-	-	-	0
SCH	Y	1	0	0	0	0	0	0
CHMIRS	Y	PO	0	-	-	-	-	0
SWAT	Y	.5	0	0	0	0	-	0
HAZNET	Y	PO	0	1	-	-	-	1
SWRCB SWF	Y	.5	0	0	0	0	-	0
HWSS CLEANUP	Y	.5	0	0	0	0	-	0
DTSC HWF	Y	.5	0	0	0	0	-	0
HIST MANIFEST	Y	PO	0	-	-	-	-	0
HIST CHMIRS	Y	PO	0	-	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
HIST CORTESE	Y	.5	0	0	0	0	-	0
CDO/CAO	Y	.5	0	0	0	0	-	0
DRYCLEANERS	Y	.25	0	3	0	-	-	3
DELISTED DRYC	Y	.25	0	0	0	-	-	0
WASTE DISCHG	Y	.25	0	1	0	-	-	1
EMISSIONS	Y	.25	0	2	0	-	-	2
Tribal	***No Tribal additional environmental record sources available for this State.***							
County								
LA SML	Y	.5	0	0	0	0	-	0
	Total:		0	23	2	3	1	29

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	HAZNET	IN & OUT SMOG AND OIL CHANGE	10344 1/2 W OLYMPIC BLVD WEST LOS ANGELES CA 90064	WNW	0.02 / 93.34	-8	22
2	CERS HAZ	MICHAEL'S CLEANERS	10344 W OLYMPIC BLVD UN 1 LOS ANGELES CA 90064	NW	0.02 / 105.84	-7	22
2	DRYCLEANERS	MICHAELS CLEANERS	10344 W OLYMPIC BLVD LOS ANGELES CA 900640000	NW	0.02 / 105.84	-7	29
2	DRYCLEANERS	MICHAELS CLEANERS	10344 W OLYMPIC BLVD LOS ANGELES CA 90036	NW	0.02 / 105.84	-7	29
2	EMISSIONS	MICHAEL'S CLEANERS, NABIL SAAD, DBA	10344 W OLYMPIC BLVD LOS ANGELES CA 90064	NW	0.02 / 105.84	-7	29
2	HHSS	MAXS TEXACO SERVICE	10344 W. OLYMPIC BLVD. WEST LOS ANGELES CA 90064	NW	0.02 / 105.84	-7	29
2	LA CITY HAZMAT	MICHAEL'S CLEANERS	10344 W OLYMPIC BLVD # 1 LOS ANGELES CA 90064	NW	0.02 / 105.84	-7	30
2	LA CITY HAZMAT	K-G AUTO	10344 W OLYMPIC BLVD LOS ANGELES CA 90064	NW	0.02 / 105.84	-7	30
2	HIST TANK	MAX'S TEXACO SERVIE	10344 W. OLYMPIC BLVD. WEST LOS ANGELES CA	NW	0.02 / 105.84	-7	30
2	RCRA SQG	MICHAELS CLEANERS	10344 W OLYMPIC BLVD LOS ANGELES CA 90064	NW	0.02 / 105.84	-7	30
2	UST LA CITY	K-G AUTO	10344 W OLYMPIC BLVD LOS ANGELES CA 90064	NW	0.02 / 105.84	-7	32
3	LA CITY HAZMAT	IN AND OUT SMOG AND OIL CHANGE	10344 1/2 W OLYMPIC BLVD UN 2 LOS ANGELES CA 90064	NW	0.02 / 112.88	-7	32

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
4	DELISTED TNK	ARCO FAC. #1251	10350 W OLYMPIC BLVD # 1251 LOS ANGELES CA 90064	WNW	0.03 / 132.45	-9	32
5	CERS HAZ	Ralphs Grocery #156	10309 W. OLYMPIC BLVD. LOS ANGELES CA 90064	NNW	0.03 / 139.25	-1	32
5	DRYCLEANERS	CENTURY WEST NORGE CLEANERS	10309 W OLYMPIC BLVD LOS ANGELES CA 900640000	NNW	0.03 / 139.25	-1	34
5	EMISSIONS	CENTURY WEST NORGE VILLAGE	10309 W. OLYMPIC BL. LOS ANGELES CA 90064	NNW	0.03 / 139.25	-1	35
5	LA CITY HAZMAT	RALPHS GROCERY #156	10309 W OLYMPIC BLVD # 156 LOS ANGELES CA 90064	NNW	0.03 / 139.25	-1	36
5	LA CITY HAZMAT	CENTURY WEST NORGE VILLAGE	10309 W OLYMPIC BLVD LOS ANGELES CA 90064	NNW	0.03 / 139.25	-1	36
6	HHSS	SHANE YENIKOMSHIAN	10350 W OLYMPIC BLVD LOS ANGELES CA 90064	W	0.03 / 168.07	-10	36
6	LA CITY HAZMAT	ARCO - AM/PM MINI MARKET #1251	10350 W OLYMPIC BLVD LOS ANGELES CA 90064	W	0.03 / 168.07	-10	36
6	HIST TANK	SHANE YENIKOMSHIAN	10350 W OLYMPIC BLVD LOS ANGELES CA	W	0.03 / 168.07	-10	36
6	UST LA CITY	ARCO - AM/PM MINI MARKET #1251	10350 W OLYMPIC BLVD LOS ANGELES CA 90064	W	0.03 / 168.07	-10	36
6	WASTE DISCHG	ARCO STATION #1251	10350 OLYMPIC LOS ANGELES CA 90064	W	0.03 / 168.07	-10	36
7	DELISTED TNK	CROWN CAR WASH	10399 W PICO BLVD LOS ANGELES CA 90064	SSE	0.22 / 1,156.10	-24	37
8	UST	TWENTIETH CENTURY FOX FILM CORP	10201 W PICO BLVD LOS ANGELES CA 90064-2606	E	0.25 / 1,320.95	50	37

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
9	VCP	CENTURY PLAZA	2025 AVENUE OF THE STARS LOS ANGELES CA 90067	NNE	0.44 / 2,306.48	73	37
10	DELISTED HAZ	HILLCREST-BEVERLY OIL CORP - RANCHO	10460 W PICO BLVD LOS ANGELES CA 90064	S	0.44 / 2,323.17	-23	37
11	DELISTED HAZ	GLIDDEN PROFESSIONAL #456	10561 W PICO BLVD LOS ANGELES CA 90064	SSW	0.48 / 2,554.91	-23	38
12	ENVIROSTOR	BEVERLY HILLS HIGH SCHOOL	241 MORENO DRIVE BEVERLY HILLS CA 90212	NNE	0.73 / 3,866.78	24	38

Executive Summary: Summary by Data Source

Standard

Federal

RCRA SQG - RCRA Small Quantity Generators List

A search of the RCRA SQG database, dated Jan 24, 2018 has found that there are 1 RCRA SQG site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
MICHAELS CLEANERS	10344 W OLYMPIC BLVD LOS ANGELES CA 90064	NW	0.02 / 105.84	2

State

ENVIROSTOR - EnviroStor Database

A search of the ENVIROSTOR database, dated Dec 21, 2017 has found that there are 1 ENVIROSTOR site(s) within approximately 1.00 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
BEVERLY HILLS HIGH SCHOOL	241 MORENO DRIVE BEVERLY HILLS CA 90212	NNE	0.73 / 3,866.78	12

UST - Permitted Underground Storage Tank (UST) in GeoTracker

A search of the UST database, dated Mar 11, 2018 has found that there are 1 UST site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
TWENTIETH CENTURY FOX FILM CORP	10201 W PICO BLVD LOS ANGELES CA 90064-2606	E	0.25 / 1,320.95	8

HHSS - Historical Hazardous Substance Storage Information Database

A search of the HHSS database, dated Aug 27, 2015 has found that there are 2 HHSS site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
MAXS TEXACO SERVICE	10344 W. OLYMPIC BLVD. WEST LOS ANGELES CA 90064	NW	0.02 / 105.84	2
SHANE YENIKOMSHIAN	10350 W OLYMPIC BLVD LOS ANGELES CA 90064	W	0.03 / 168.07	6

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key

DELISTED TNK - Delisted Storage Tanks

A search of the DELISTED TNK database, dated Mar 11, 2018 has found that there are 2 DELISTED TNK site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
ARCO FAC. #1251	10350 W OLYMPIC BLVD # 1251 LOS ANGELES CA 90064	WNW	0.03 / 132.45	4
CROWN CAR WASH	10399 W PICO BLVD LOS ANGELES CA 90064	SSE	0.22 / 1,156.10	7

DELISTED HAZ - Delisted Environmental Reporting System (CERS) Hazardous Waste Sites

A search of the DELISTED HAZ database, dated Mar 22, 2018 has found that there are 2 DELISTED HAZ site(s) within approximately 0.50 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
HILLCREST-BEVERLY OIL CORP - RANCHO	10460 W PICO BLVD LOS ANGELES CA 90064	S	0.44 / 2,323.17	10
GLIDDEN PROFESSIONAL #456	10561 W PICO BLVD LOS ANGELES CA 90064	SSW	0.48 / 2,554.91	11

VCP - Voluntary Cleanup Program

A search of the VCP database, dated Sep 7, 2017 has found that there are 1 VCP site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
CENTURY PLAZA	2025 AVENUE OF THE STARS LOS ANGELES CA 90067	NNE	0.44 / 2,306.48	9

CERS HAZ - California Environmental Reporting System (CERS) Hazardous Waste Sites

A search of the CERS HAZ database, dated Mar 22, 2018 has found that there are 2 CERS HAZ site(s) within approximately 0.12 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
MICHAEL'S CLEANERS	10344 W OLYMPIC BLVD UN 1 LOS ANGELES CA 90064	NW	0.02 / 105.84	2
Ralphs Grocery #156	10309 W. OLYMPIC BLVD. LOS ANGELES CA 90064	NNW	0.03 / 139.25	5

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key

HIST TANK - Historical Hazardous Substance Storage Container Information - Facility Summary

A search of the HIST TANK database, dated May 27, 1988 has found that there are 2 HIST TANK site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
MAX'S TEXACO SERVIE	10344 W. OLYMPIC BLVD. WEST LOS ANGELES CA	NW	0.02 / 105.84	2
SHANE YENIKOMSHIAN	10350 W OLYMPIC BLVD LOS ANGELES CA	W	0.03 / 168.07	6

County

UST LA CITY - Los Angeles County - City of Los Angeles UST List

A search of the UST LA CITY database, dated Sep 01, 2017 has found that there are 2 UST LA CITY site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
K-G AUTO	10344 W OLYMPIC BLVD LOS ANGELES CA 90064	NW	0.02 / 105.84	2
ARCO - AM/PM MINI MARKET #1251	10350 W OLYMPIC BLVD LOS ANGELES CA 90064	W	0.03 / 168.07	6

LA CITY HAZMAT - Los Angeles County - City of Los Angeles Hazardous Materials Facilities

A search of the LA CITY HAZMAT database, dated Sep 01, 2017 has found that there are 6 LA CITY HAZMAT site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
K-G AUTO	10344 W OLYMPIC BLVD LOS ANGELES CA 90064	NW	0.02 / 105.84	2
MICHAEL'S CLEANERS	10344 W OLYMPIC BLVD # 1 LOS ANGELES CA 90064	NW	0.02 / 105.84	2
IN AND OUT SMOG AND OIL CHANGE	10344 1/2 W OLYMPIC BLVD UN 2 LOS ANGELES CA 90064	NW	0.02 / 112.88	3
CENTURY WEST NORGE VILLAGE	10309 W OLYMPIC BLVD LOS ANGELES CA 90064	NNW	0.03 / 139.25	5

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
RALPHS GROCERY #156	10309 W OLYMPIC BLVD # 156 LOS ANGELES CA 90064	NNW	0.03 / 139.25	5
ARCO - AM/PM MINI MARKET #1251	10350 W OLYMPIC BLVD LOS ANGELES CA 90064	W	0.03 / 168.07	6

Non Standard

State

HAZNET - Hazardous Waste Manifest Data

A search of the HAZNET database, dated Oct 24, 2016 has found that there are 1 HAZNET site(s) within approximately 0.02 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
IN & OUT SMOG AND OIL CHANGE	10344 1/2 W OLYMPIC BLVD WEST LOS ANGELES CA 90064	WNW	0.02 / 93.34	1

DRYCLEANERS - Drycleaner Facilities

A search of the DRYCLEANERS database, dated Jan 18, 2018 has found that there are 3 DRYCLEANERS site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
MICHAELS CLEANERS	10344 W OLYMPIC BLVD LOS ANGELES CA 90036	NW	0.02 / 105.84	2
MICHAELS CLEANERS	10344 W OLYMPIC BLVD LOS ANGELES CA 900640000	NW	0.02 / 105.84	2
CENTURY WEST NORGE CLEANERS	10309 W OLYMPIC BLVD LOS ANGELES CA 900640000	NNW	0.03 / 139.25	5

WASTE DISCHG - Waste Discharge Requirements

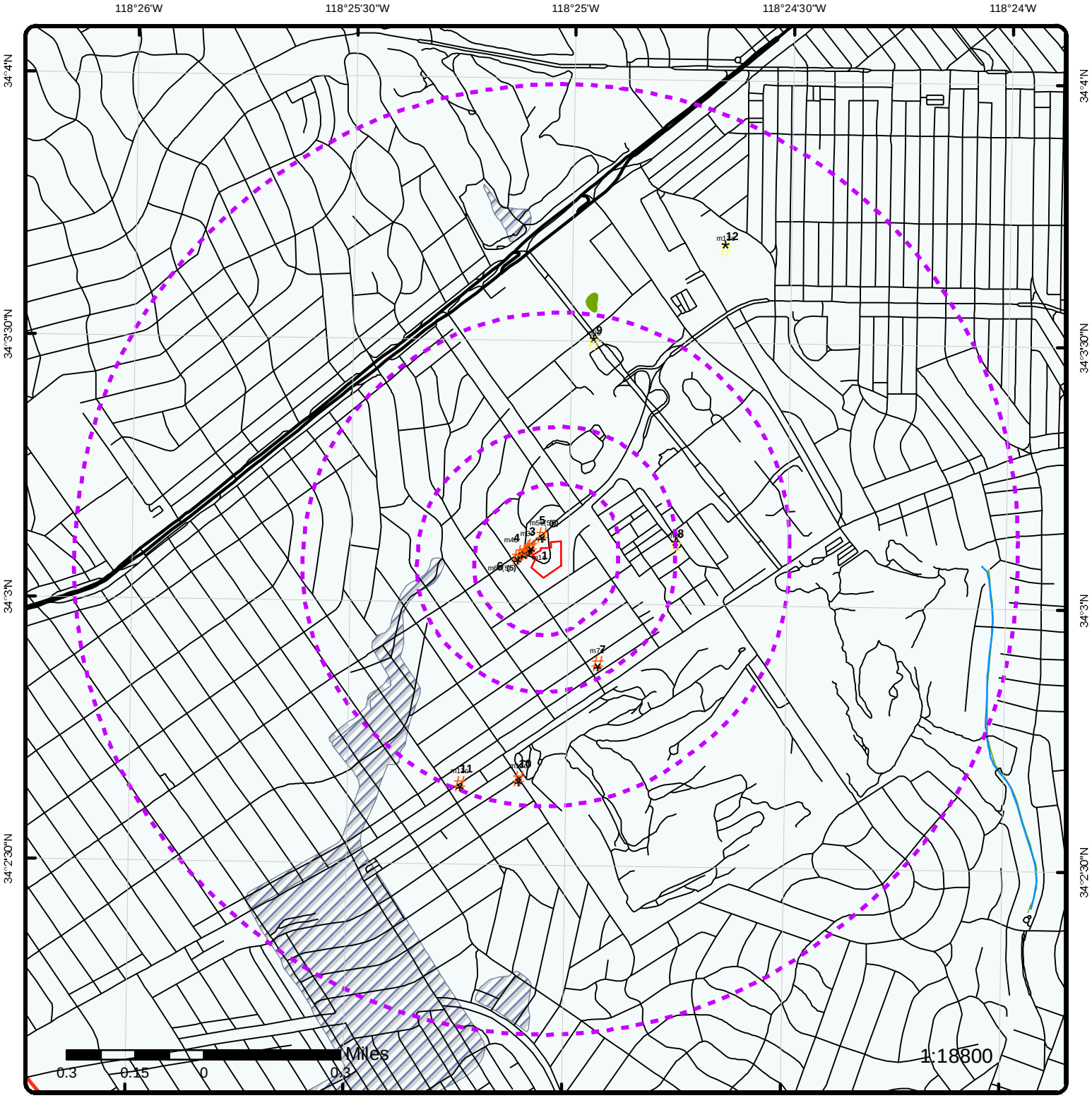
A search of the WASTE DISCHG database, dated Oct 3, 2017 has found that there are 1 WASTE DISCHG site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
ARCO STATION #1251	10350 OLYMPIC LOS ANGELES CA 90064	W	0.03 / 168.07	6

EMISSIONS - Toxic Pollutant Emissions Facilities

A search of the EMISSIONS database, dated Dec 31, 2015 has found that there are 2 EMISSIONS site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
MICHAEL'S CLEANERS, NABIL SAAD, DBA	10344 W OLYMPIC BLVD LOS ANGELES CA 90064	NW	0.02 / 105.84	2
CENTURY WEST NORGE VILLAGE	10309 W. OLYMPIC BL. LOS ANGELES CA 90064	NNW	0.03 / 139.25	5



Map : 1 Mile Radius

Order No: 20180424328

Address: n/a, Los Angeles, CA, 90064

ENVIRONMENTAL RISK INFORMATION SERVICES

Project Property	Rails	State Boundary	FWS Special Designation Areas
Buffer Outline	Major Highways	National Priority List Sites	State Brownfield Sites
Eris Sites with Higher Elevation	Major Highways Ramps	National Wetland	State Brownfield Areas
Eris Sites with Same Elevation	Major Roads	Indian Reserve Land	State Superfund Areas:Dept. of Defense
Eris Sites with Lower Elevation	Major Roads Ramps	Historic Fill	State Superfund Areas:NPL
Eris Sites with Unknown Elevation	Secondary Roads	100 Year Flood Zone	WQARF Areas
County Boundary	Secondary Roads Ramps	500 Year Flood Zone	Federal Lands: Dept. of Defense (owned/administered areas)
	Local Roads and Ramps		

Source: © 2016 ESRI

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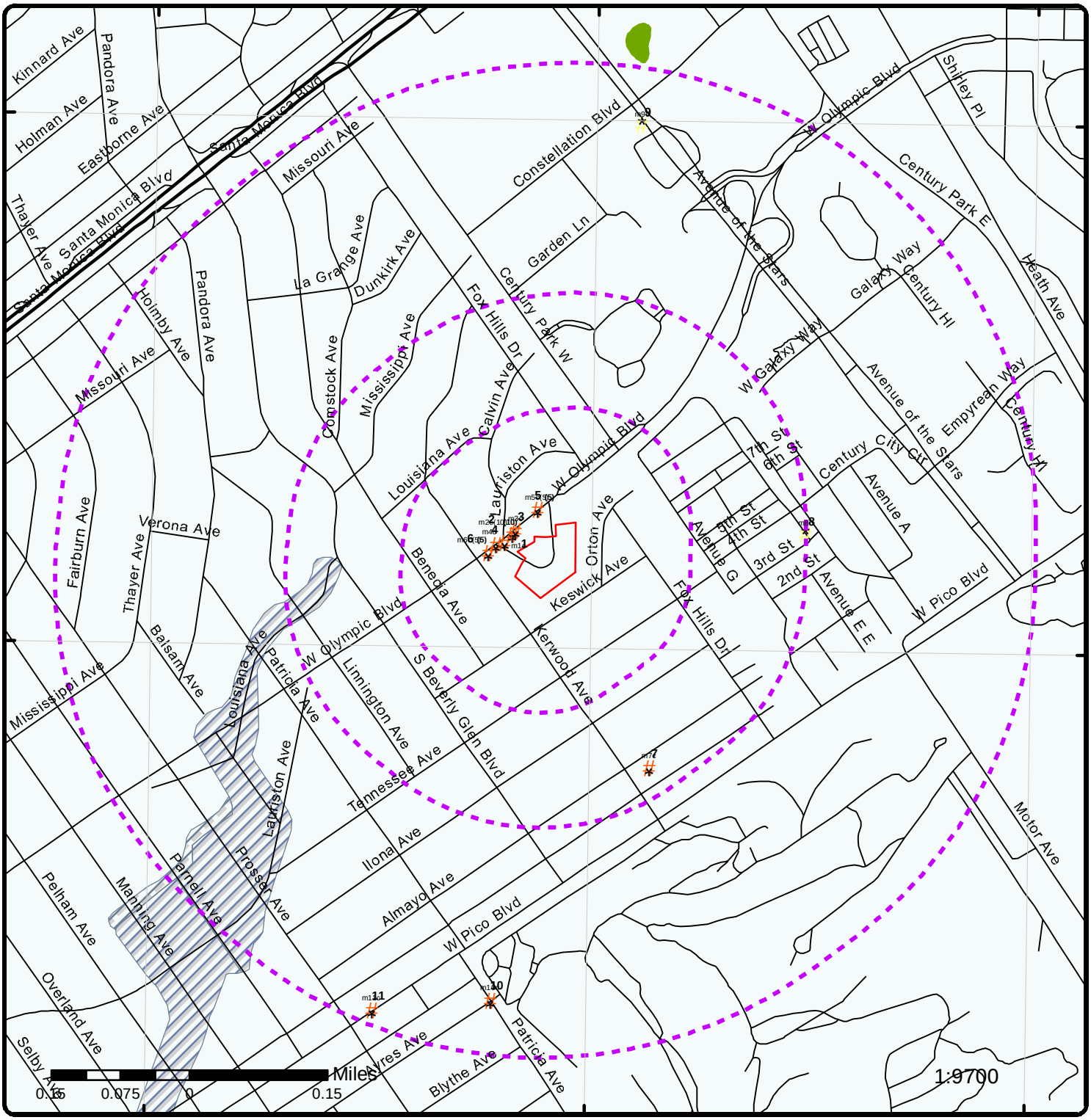

Map : 0.5 Mile Radius

Order No: 20180424328

Address: n/a, Los Angeles, CA, 90064

ENVIRONMENTAL RISK INFORMATION SERVICES

Project Property	Rails	State Boundary	FWS Special Designation Areas
Buffer Outline	Major Highways	National Priority List Sites	State Brownfield Sites
Eris Sites with Higher Elevation	Major Highways Ramps	National Wetland	State Brownfield Areas
Eris Sites with Same Elevation	Major Roads	Indian Reserve Land	State Superfund Areas:Dept. of Defense
Eris Sites with Lower Elevation	Major Roads Ramps	Historic Fill	State Superfund Areas:NPL
Eris Sites with Unknown Elevation	Secondary Roads	100 Year Flood Zone	WQARF Areas
County Boundary	Secondary Roads Ramps	500 Year Flood Zone	Federal Lands: Dept. of Defense (owned/administered areas)
	Local Roads and Ramps		

Source: © 2016 ESRI

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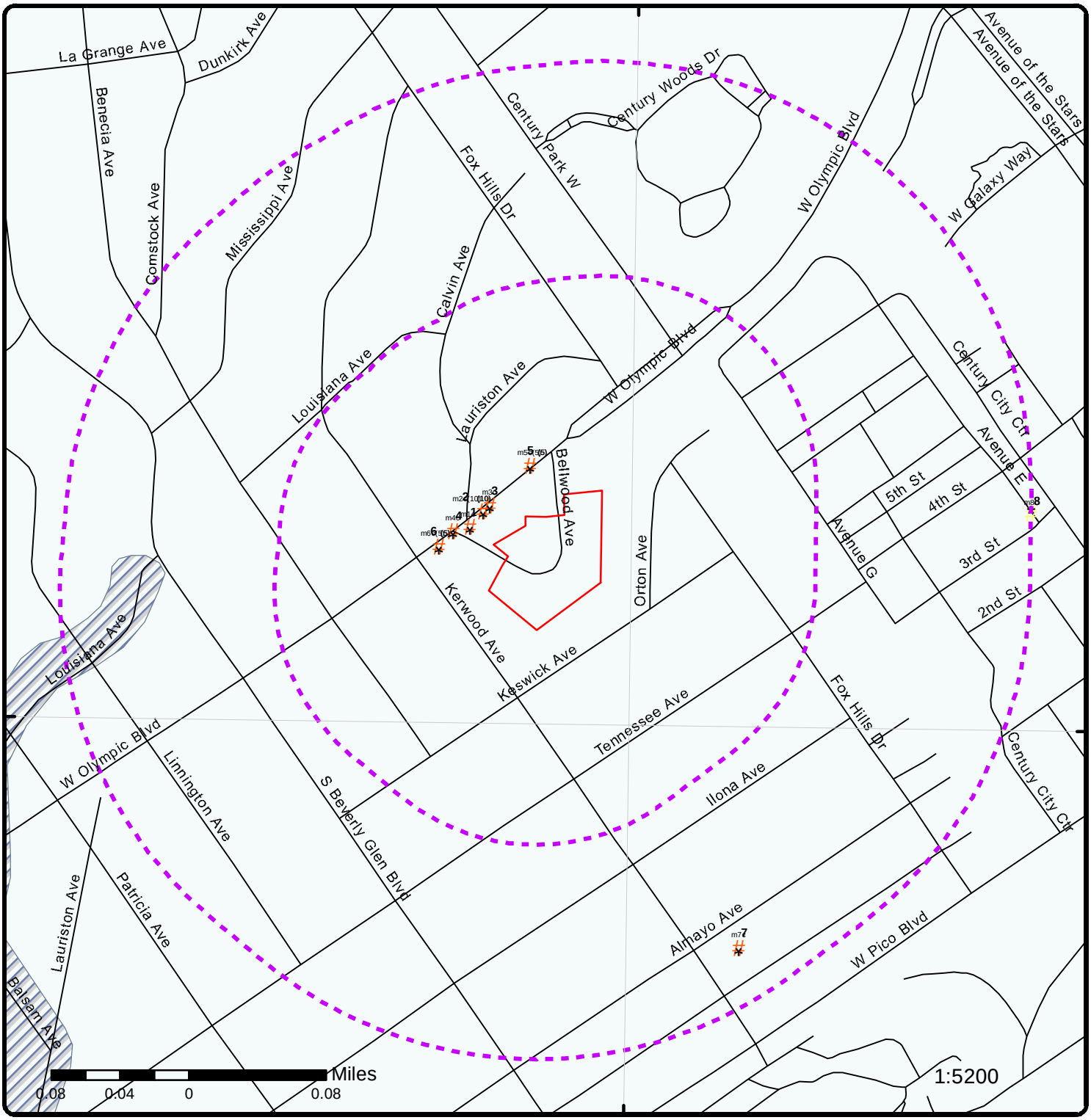

Map : 0.25 Mile Radius

Order No: 20180424328

Address: n/a, Los Angeles, CA, 90064

ENVIRONMENTAL RISK INFORMATION SERVICES

Project Property	Rails	State Boundary	FWS Special Designation Areas
Buffer Outline	Major Highways	National Priority List Sites	State Brownfield Sites
Eris Sites with Higher Elevation	Major Highways Ramps	National Wetland	State Brownfield Areas
Eris Sites with Same Elevation	Major Roads	Indian Reserve Land	State Superfund Areas:Dept. of Defense
Eris Sites with Lower Elevation	Major Roads Ramps	Historic Fill	State Superfund Areas:NPL
Eris Sites with Unknown Elevation	Secondary Roads	100 Year Flood Zone	WQARF Areas
County Boundary	Secondary Roads Ramps	500 Year Flood Zone	Federal Lands: Dept. of Defense (owned/administered areas)
	Local Roads and Ramps		

Source: © 2016 ESRI

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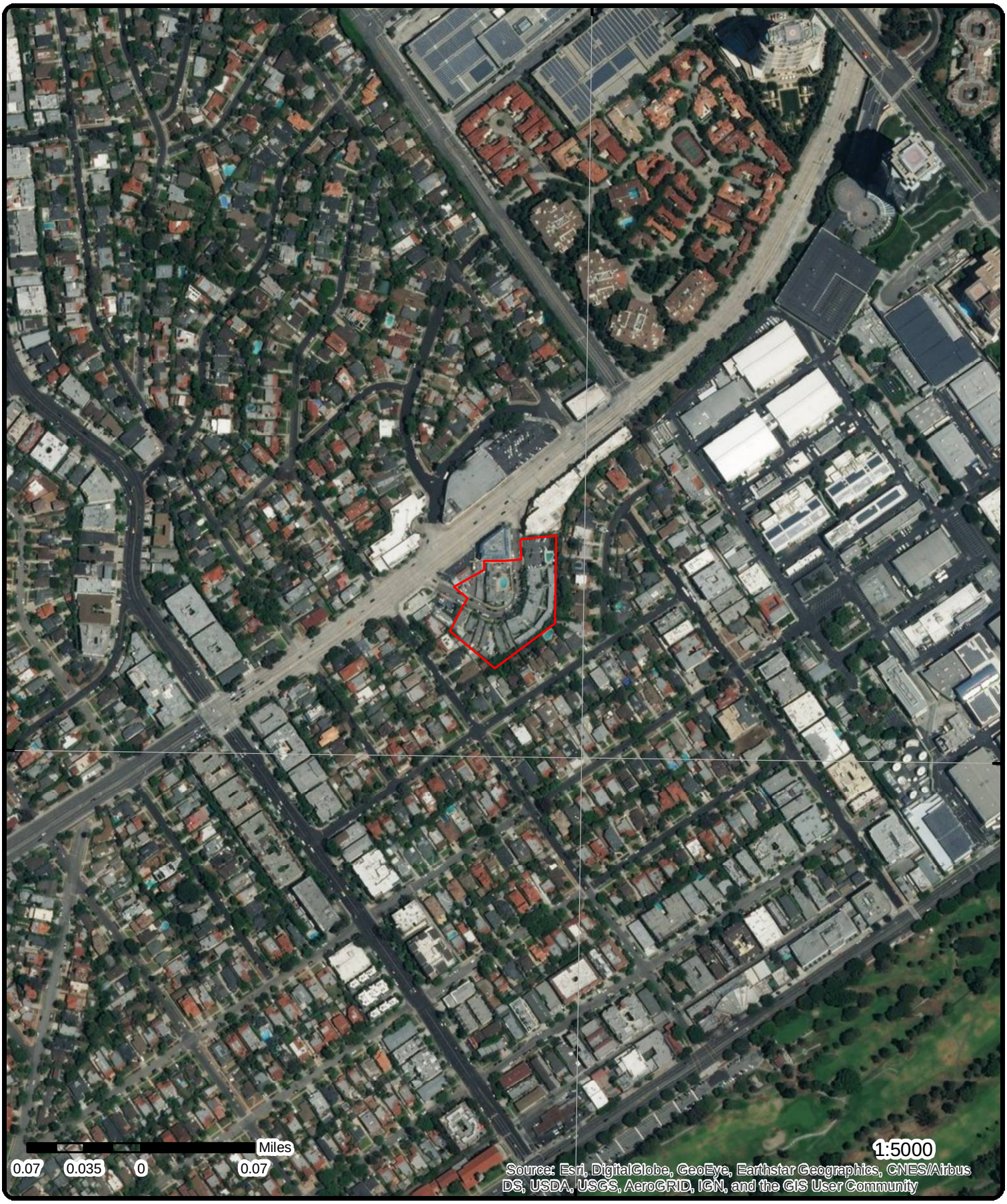
118°25'W



Aerial (2016)

Order No: 20180424328

Address: n/a, Los Angeles, CA, 90064

Source: ESRI World Imagery

ENVIRONMENTAL RISK INFORMATION SERVICES

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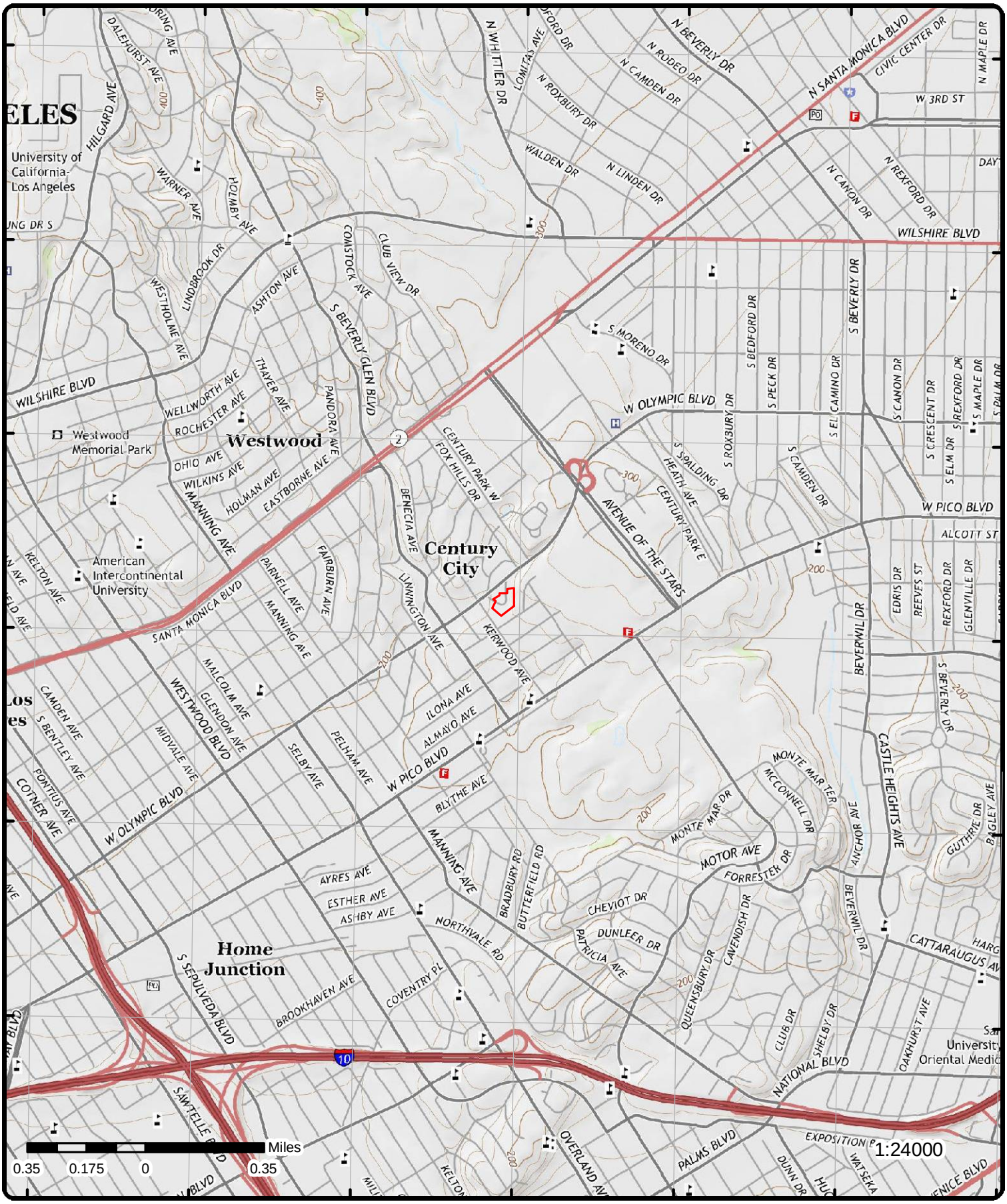

Topographic Map (2015)

Order No: 20180424328

Address: n/a, Los Angeles, CA, 90064

Quadrangle(s): Beverly Hills, CA

Source: USGS Topographic Map

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ENVIRONMENTAL RISK INFORMATION SERVICES

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Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	WNW	0.02 / 93.34	219.09 / -8	IN & OUT SMOG AND OIL CHANGE 10344 1/2 W OLYMPIC BLVD WEST LOS ANGELES CA 90064	HAZNET

SIC Code:	7538	**Mailing City:**	WEST LOS ANGELES
NAICS Code:	811111	**Mailing State:**	CA
EPA ID:	CAL000303657	**Mailing Zip:**	90064
Create Date:	2/21/2006 3:37:00 PM	**Region Code:**	3
Fac Act Ind:	No	**Owner Name:**	AMIR H LOTFIZADEH
Inact Date:	6/30/2007	**Owner Addr 1:**	18236 NORDHOFF ST
County Code:	19	**Owner Addr 2:**	
County Name:	Los Angeles	**Owner City:**	NORTHRIDGE
Mail Name:		**Owner State:**	CA
Mailing Addr 1:	10344 1/2 W OLYMPIC BLVD	**Owner Zip:**	91325
Mailing Addr 2:		**Owner Phone:**	3104468118
Owner Fax:			

Contact Information

--	--
Contact Name:	AMIR LOTFIZADEH
Street Address 1:	18236 NORDHOFF ST
Street Address 2:	
City:	NORTHRIDGE
State:	CA
Zip:	91325
Phone:	3104468118
--	--

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	1 of 10	NW	0.02 / 105.84	220.52 / -7	MICHAEL'S CLEANERS 10344 W OLYMPIC BLVD UN 1 LOS ANGELES CA 90064	CERS HAZ

Site ID:	134879
Latitude:	34.051660
Longitude:	-118.417940

Regulated Programs

EI ID:	10253521	**EI Description:**	Chemical Storage Facilities
EI ID:	10253521	**EI Description:**	Hazardous Waste Generator

Affiliations

Affil Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	
Address:	10344 OLYMPIC BL
City:	LOS ANGELES
State:	CA
Country:	
Zip Code:	90064
Phone:	

Affil Type Desc:	CUPA District

Entity Name: Los Angeles City Fire Department
Entity Title:
Address: 200 North Main Street, Room 1780
City: Los Angeles
State: CA
Country:
Zip Code: 90012
Phone: (213) 978-3680

Affil Type Desc: Parent Corporation
Entity Name: Michael's Cleaners
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Evaluations

Eval Date: 07-19-2016
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Los Angeles County Fire Department
Eval Program: HW
Eval Source: CERS
Eval Notes:

Antonio Guzman

Eval Date: 01-04-2013
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Los Angeles County Fire Department
Eval Program: HW
Eval Source: CERS
Eval Notes:

Inspected by Mashid Harrell, HMS II Consent by Leo

Eval Date: 07-03-2013
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Los Angeles County Fire Department
Eval Program: HW
Eval Source: CERS
Eval Notes:

Eval Date: 07-03-2013
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Los Angeles County Fire Department
Eval Program: HW
Eval Source: CERS
Eval Notes:

Inspected by M Ordonez, HMS II Consent by A Guzman

Eval Date: 06-16-2016
Violations Found: Yes

Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Los Angeles City Fire Department
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

On site for routine hazardous materials and business emergency plan inspection. Consent to enter and inspect was given by a employee. Observed the facility and inspected hazardous materials storage. Annual employee safety training records were not maintained. Facility has also not electronically disclosed the onsite hazardous materials inventory or submitted a business emergency plan in California Environmental Reporting System (CERS). Please go to https://cersbusiness2.calepa.ca.gov to complete a chemical inventory disclosure and business emergency plan. The facility is responsible for identifying all hazardous materials, to include hazardous wastes, which are above disclosure thresholds. If there is a change in the type or amount of chemicals that are maintained on site, please submit revised documents (electronically)within 30 days of the change.

Violations

Violation Date: 06-16-2016
Violation Division: Los Angeles City Fire Department
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Program:

HMRRP

Violation Source:

CERS

Violation Notes:

Violation Description:

Failure to establish and electronically submit an adequate training program in safety procedures in the event of a release or threatened release of a hazardous material.

Violations

Violation Date: 06-16-2016
Violation Division: Los Angeles City Fire Department
Citation: HSC 6.95 25505.1 - California Health and Safety Code, Chapter 6.95, Section(s) 25505.1
Violation Program:

HMRRP

Violation Source:

CERS

Violation Notes:

Violation Description:

Failure to notify property owner in writing that the business is subject to the business plan program and has complied with its provisions.

Violations

Violation Date: 06-16-2016
Violation Division: Los Angeles City Fire Department
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Program:

HMRRP

Violation Source:

CERS

Violation Notes:

Violation Description:

Failure to complete and electronically submit a site map with all required content.

Violations

Violation Date: 06-16-2016
Violation Division: Los Angeles City Fire Department
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Program:

HMRRP

Violation Source:

CERS

Violation Notes:

Violation Description:

Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.

Violations

Violation Date: 06-16-2016
Violation Division: Los Angeles City Fire Department
Citation: 19 CCR 6.95 25508(a)(1) - California Code of Regulations, Title 19, Chapter 6.95, Section(s) 25508(a)(1)
Violation Program:

HMRRP

Violation Source:

CERS

Violation Notes:

Violation Description:

Failure to complete and electronically submit the Business Activities Page and/or Business Owner Operator Identification Page.

Violations

Violation Date: 06-16-2016
Violation Division: Los Angeles City Fire Department
Citation: HSC 6.95 25505.1 - California Health and Safety Code, Chapter 6.95, Section(s) 25505.1
Violation Program:

HMRRP

Violation Source:

CERS

Violation Notes:

Violation Description:

Failure to provide a copy of the business plan to the owner or the owner's agent within five working days after receiving a request for a copy from the owner or the owner's agent.

Violations

Violation Date: 07-03-2013
Violation Division: Los Angeles County Fire Department
Citation: 22 CCR 12 66262.23(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.23(a)
Violation Program:

HW

Violation Source:

CERS

Violation Notes:

Returned to compliance on 11/13/2013. Provide manifest for waste sludge

Violation Description:

Failure to properly complete the Hazardous Waste manifest.

Violations

Violation Date: 06-16-2016
Violation Division: Los Angeles City Fire Department
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Program:

HMRRP

Violation Source:

CERS

Violation Notes:

Violation Description:

Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.

Violations

Violation Date: 01-04-2013
Violation Division: Los Angeles County Fire Department
Citation: 22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Program:

HW

Violation Source:

CERS

Violation Notes:

No disposal receipts

Violation Description:

Failure to maintain uniform hazardous waste manifest, consolidated manifest, or bills of lading copies for three years.

Violations

Violation Date: 06-16-2016
Violation Division: Los Angeles City Fire Department
Citation: HSC 6.95 25508.1(a)-(f) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(f)
Violation Program:

HMRRP

Violation Source:

CERS

Violation Notes:

Violation Description:

Failure to electronically update business plan within 30 days of any one of the following events:
A 100 percent or more increase in the quantity of a previously disclosed material.
Any handling of a previously undisclosed hazardous materials at or above reportable quantities.
A change of business address, business ownership, or business name.
A substantial change in the handler's operations that requires modification to any portion of the business plan.

Violations

Violation Date: 06-16-2016
Violation Division: Los Angeles City Fire Department
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Program:

HMRRP

Violation Source:

CERS

Violation Notes:

Violation Description:

Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.

Violations

Violation Date: 07-19-2016
Violation Division: Los Angeles County Fire Department
Citation: 22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Program:

HW

Violation Source:

CERS

Violation Notes:

Returned to compliance on 07/12/2017.

Violation Description:

Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.

Violations

Violation Date: 06-16-2016
Violation Division: Los Angeles City Fire Department
Citation: HSC 6.95 25507 - California Health and Safety Code, Chapter 6.95, Section(s) 25507
Violation Program:

HMRRP

Violation Source:

CERS

Violation Notes:

Violation Description:

Failure to adequately establish and implement a business plan when storing/handling a hazardous material at or above reportable quantities.

Violations

Violation Date: 06-16-2016
Violation Division: Los Angeles City Fire Department
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Program:

HMRRP

Violation Source:

CERS

Violation Notes:

Violation Description:

Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.

Violations

Violation Date: 06-16-2016
Violation Division: Los Angeles City Fire Department
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Program:

HMRRP

Violation Source:

CERS

Violation Notes:

Violation Description:

Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.

Enforcements

Enf Action Date: 07-03-2013 ***Enf Action Program:*** HW
Enf Action Type: Notice of Violation (Unified Program) ***Enf Action Source:*** CERS
Enf Action Division: Los Angeles County Fire Department
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	2 of 10	NW	0.02 / 105.84	220.52 / -7	MICHAELS CLEANERS 10344 W OLYMPIC BLVD LOS ANGELES CA 900640000	DRYCLEANERS

EPA ID:	CAR000007229	**Owner Zip:**	900640000
Create Date:	6/20/1996	**Owner Phone:**	3102030609
Facility Act Ind:	No	**Owner Fax:**	
In Act Date:	6/30/2009	**Contact Name:**	NABIL K SAAD
County Name:	Los Angeles	**Contact Street 1:**	10344 W OLYMPIC BLVD
Region Code:	3	**Contact Street 2:**	
Owner Name:	NABIL K SAAD	**Contact City:**	LOS ANGELES
Owner Street 1:	10344 W OLYMPIC BLVD	**Contact State:**	CA
Owner Street 2:		**Contact Zip:**	900640000
Owner City:	LOS ANGELES	**Contact Phone:**	3102030609
Owner State:	CA	**Mail Name:**	

--Details--

NAICS Code:	81232
Naics Desc:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Desc:	Power Laundries, Family and Commercial

2	3 of 10	NW	0.02 / 105.84	220.52 / -7	MICHAELS CLEANERS 10344 W OLYMPIC BLVD LOS ANGELES CA 90036	DRYCLEANERS

EPA ID:	CAC002906754	**Owner Zip:**	90036
Create Date:	4/19/2017 8:35:40 PM	**Owner Phone:**	8185228512
Facility Act Ind:	No	**Owner Fax:**	
In Act Date:	8/4/2017 11:45:55 AM	**Contact Name:**	MICHAEL SAAD
County Name:	Los Angeles	**Contact Street 1:**	10344 W OLYMPIC BLVD
Region Code:	3	**Contact Street 2:**	
Owner Name:	MICHAEL SAAD	**Contact City:**	LOS ANGELES
Owner Street 1:	10344 W OLYMPIC BLVD	**Contact State:**	CA
Owner Street 2:		**Contact Zip:**	90036
Owner City:	LOS ANGELES	**Contact Phone:**	8185228512
Owner State:	CA	**Mail Name:**	

2	4 of 10	NW	0.02 / 105.84	220.52 / -7	MICHAEL'S CLEANERS, NABIL SAAD, DBA 10344 W OLYMPIC BLVD LOS ANGELES CA 90064	EMISSIONS

2015 Toxic Data

Facility ID:	120899	**COID:**	LA
Facility SIC Code:	7216	**DISN:**	SOUTH COAST AQMD
CO:	19	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2	5 of 10	NW	0.02 / 105.84	220.52 / -7	MAXS TEXACO SERVICE 10344 W. OLYMPIC BLVD. WEST LOS ANGELES CA 90064	HHSS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

County: Los Angeles
Pdf File Url: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00027acc.pdf

---

2	6 of 10	NW	0.02 / 105.84	220.52 / -7	MICHAEL'S CLEANERS 10344 W OLYMPIC BLVD # 1 LOS ANGELES CA 90064	LA CITY HAZMAT

Facility ID: FA0029991
Last Run Date: 9/1/2017
Source Name: Active Hazardous Materials (HM) Inventory

2	7 of 10	NW	0.02 / 105.84	220.52 / -7	K-G AUTO 10344 W OLYMPIC BLVD LOS ANGELES CA 90064	LA CITY HAZMAT

Facility ID: FA0032269
Last Run Date: 9/1/2017
Source Name: In-Active Hazardous Materials (HM) Inventory

2	8 of 10	NW	0.02 / 105.84	220.52 / -7	MAX'S TEXACO SERVIE 10344 W. OLYMPIC BLVD. WEST LOS ANGELES CA	HIST TANK

Owner Name: MAX M. LANGER
Owner Street: 1376 N. GEVERLY DRIVE
Owner City: BEVERLY HILLS
Owner State: CA
Owner Zip: 90210
No of Containers: 5
County: LOS ANGELES
Facility State: CA
Facility Zip: 90064

2	9 of 10	NW	0.02 / 105.84	220.52 / -7	MICHAELS CLEANERS 10344 W OLYMPIC BLVD LOS ANGELES CA 90064	RCRA SQG

EPA Handler ID: CAR000007229
Land Type Code: P
Land Type Desc: Private
Federal Waste Generator Code: 2
Gen Status Univ: SQG
Gen Status Univ Desc: Small Quantity Generator
Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Recycler Activity: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Inject Activity: No
Receives Waste from Offsite: No
TSD Type: -----
TSD Activity: No
Corrective Action Univ: No
Action has been Imposed: No
Action under 3004 (U)/(V): No
Institutional Control Indicator: N
Used Oil Transporter:
Used Oil Transfer Facility:
Used Oil Processor:
Used Oil Refiner:
Used Oil Burner:
Used Oil Market Burner:
Used Oil Spec Marketer:

Activity Location:	CA
County Code:	CA037
County Name:	LOS ANGELES
Contact Name:	NABIL SAAD
Contact Phone No and Exten:	310-203-0609
Contact Email:	
Contact Address:	10344 W OLYMPIC BLVD , LOS ANGELES , CA, 90064 , US
Mailing Address:	10344 , W OLYMPIC BLVD , LOS ANGELES , CA, 90064 , US

Violation/Evaluation Summary

Note: As of Jan 24 2018, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Details

Source Type:	N	**Used Oil Transporter:**	No
Receive Date:	19951129	**UO Transfer Fac:**	No
Non Notifier:		**Used Oil Processor:**	No
Acknowledge Flag:		**Used Oil Refiner:**	No
Acknowledge Date:	19951207	**Used Oil Burner:**	No
Accessibility:		**UO Market Burner:**	No
Land Type:	P	**UO Spec Marketer:**	No
Fed Waste Gen Own:	HQ	**Current Site Name:**	MICHAELS CLEANERS
Fed Waste Gen Cd:	2	**Location Street No:**	10344
Fed Waste Gen Desc:	Small Quantity Generator	**Location Street 1:**	W OLYMPIC BLVD
ST Waste Gen Own:		**Location Street 2:**	
State Waste Gen Cd:		**Location City:**	LOS ANGELES
Short Term Gen:	No	**Location State:**	CA
Importer Activity:	No	**Location Zip Code:**	90064
Mixed Waste Gen:	No	**County Code:**	CA037
Transporter:	No	**State District:**	
Transfer Facility:	No	**Mailing Street No:**	10344
TSD Activity:	No	**Mailing Street 1:**	W OLYMPIC BLVD
Recycler Activity:	No	**Mailing Street 2:**	
Onsite Burn Exempt:	No	**Mailing City:**	LOS ANGELES
Furnace Exemption:	No	**Mailing State:**	CA
Underground Inject:	No	**Mailing Zip Code:**	90064
Off Site Receipt:	No	**Mailing Country:**	US
Waste Dest Fac:	No	**Contact First Name:**	NABIL
Subpart K College:		**Contact Middle Initial:**	
Subpart K Hospital:		**Contact Last Name:**	SAAD
Subpart K Non Profit:		**Contact Street No:**	
Subpart K Withdraw:		**Contact Street 1:**	10344 W OLYMPIC BLVD
Include Ntnl Rprt:		**Contact Street 2:**	
Reporting Cycle:		**Contact City:**	LOS ANGELES
LQHUW:	No	**Contact State:**	CA
Trader Importer:		**Contact Zip:**	90064
Trader Exporter:		**Contact Country:**	US
Slab Importer:		**Contact Phone:**	310-203-0609
Slab Exporter:		**Contact Phone Ext:**	
Current Record:	Yes	**Contact Fax:**	
Location Country:	US	**Contact Email Addr:**	
State District Owner:		**Contact Title:**	

Owner/Operator Details

Owner/Operator Ind:	CO	**Country:**	
Name:	NABIL K SAAD	**Zip Code:**	90064
Street No:		**Phone:**	310-203-0609
Street 1:	10344 W OLYMPIC BLVD	**Type:**	P
Street 2:		**Date Became Current:**	
City:	LOS ANGELES	**Date Ended Current:**	
State:	CA		
Source Type:	N		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	10 of 10	NW	0.02 / 105.84	220.52 / -7	K-G AUTO 10344 W OLYMPIC BLVD LOS ANGELES CA 90064	UST LA CITY

Facility ID: FA0032269
Last Run Date: 9/1/2017
Source Name: In-Active UnderGround Storage Petroleum Tanks (UST) Inventory

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	1 of 1	NW	0.02 / 112.88	220.52 / -7	IN AND OUT SMOG AND OIL CHANGE 10344 1/2 W OLYMPIC BLVD UN 2 LOS ANGELES CA 90064	LA CITY HAZMAT

Facility ID: FA0032034
Last Run Date: 9/1/2017
Source Name: In-Active Hazardous Materials (HM) Inventory

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	1 of 1	WNW	0.03 / 132.45	218.18 / -9	ARCO FAC. #1251 10350 W OLYMPIC BLVD # 1251 LOS ANGELES CA 90064	DELISTED TNK

Facility ID: 24000
County: Los Angeles
Permitting Agency: LOS ANGELES, CITY OF
Original Source: UST
Record Date: 30-JAN-2017
Latitude: 34.05163
Longitude: -118.41844

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	1 of 5	NNW	0.03 / 139.25	226.38 / -1	Ralphs Grocery #156 10309 W. OLYMPIC BLVD. LOS ANGELES CA 90064	CERS HAZ

Site ID: 60083
Latitude: 34.052620
Longitude: -118.417620

Regulated Programs

EI ID: 10160029 **EI Description:** Hazardous Waste Generator

EI ID: 10160029 **EI Description:** Chemical Storage Facilities

Affiliations

Affil Type Desc: CUPA District
Entity Name: Los Angeles City Fire Department
Entity Title:
Address: 200 North Main Street, Room 1780
City: Los Angeles
State: CA
Country:
Zip Code: 90012
Phone: (213) 978-3680

Affil Type Desc: Identification Signer
Entity Name: SHERRIE WALTERS
Entity Title: MANAGER ENVIRONMENTAL AFFAIRS
Address:
City:
State:
Country:

Zip Code:
Phone:

Affil Type Desc: Secondary Emergency Contact
Entity Name: 24-Hr Call Center
Entity Title: 24 Hour Security
Address:
City:
State:
Country:
Zip Code:
Phone: (800) 472-5747

Affil Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title:
Address: P.O. Box 54143
City: Los Angeles
State: CA
Country:
Zip Code: 90054-0143
Phone:

Affil Type Desc: Operator
Entity Name: Ralphs Grocery Company
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone: (310) 884-9000

Affil Type Desc: Document Preparer
Entity Name: Ralphs Grocery Company
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Legal Owner
Entity Name: Ralphs Grocery Company
Entity Title:
Address: P.O. Box 54143
City: Los Angeles
State: CA
Country: United States
Zip Code: 90054-0143
Phone: (310) 884-9000

Affil Type Desc: Property Owner
Entity Name: Ornest Family Partnership II(OFPII)
Entity Title:
Address: 702 Trenton Dr
City: Beverly Hills
State: CA
Country: United States
Zip Code: 90210
Phone: (818) 789-6039

Affil Type Desc: Parent Corporation
Entity Name: Ralphs Grocery Company
Entity Title:
Address:
City:
State:

Country:
Zip Code:
Phone:

Affil Type Desc: Primary Emergency Contact
Entity Name: Store Director
Entity Title: Director
Address:
City:
State:
Country:
Zip Code:
Phone: (714) 608-1993

Affil Type Desc: Environmental Contact
Entity Name: SHERRIE WALTERS
Entity Title:
Address: P.O. Box 54143
City: Los Angeles
State: CA
Country:
Zip Code: 90054-0143
Phone: (310) 884-4016

Evaluations

Eval Date: 01-03-2017
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Los Angeles City Fire Department
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Permission to inspect given by Dianne Raymond **** Annual submission of a hazardous materials business plan to CERS by March 1 of every year. Please remember that any change in inventory of greater than 100 percent will require new submission within 30 days of that change.******* Copy of inspection report sent to: dianne.raymond@stores.ralphs.com

Eval Date: 10-31-2013
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Los Angeles City Fire Department
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

05/09/2016 Changed service code 106 to 006 per Royce Long request.

Eval Date: 08-20-2015
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Los Angeles County Fire Department
Eval Program: HW
Eval Source: CERS
Eval Notes:

Ana Molina

5	*2 of 5*	*NNW*	*0.03 / 139.25*	*226.38 / -1*	*CENTURY WEST NORGE CLEANERS 10309 W OLYMPIC BLVD*	*DRYCLEANERS*

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
					LOS ANGELES CA 900640000	

EPA ID:	CAD981651425	**Owner Zip:**	--
Create Date:	7/3/1987	**Owner Phone:**	0000000000
Facility Act Ind:	No	**Owner Fax:**	
In Act Date:	1/1/1995	**Contact Name:**	UNDELIVERABLE PER SURVEY
County Name:	Los Angeles	**Contact Street 1:**	12/94 AD
Region Code:	3	**Contact Street 2:**	
Owner Name:	--	**Contact City:**	--
Owner Street 1:	--	**Contact State:**	99
Owner Street 2:		**Contact Zip:**	--
Owner City:	--	**Contact Phone:**	--
Owner State:	99	**Mail Name:**	

5	3 of 5	NNW	0.03 / 139.25	226.38 / -1	CENTURY WEST NORGE VILLAGE 10309 W. OLYMPIC BL. LOS ANGELES CA 90064	EMISSIONS

1987 Criteria Data

Facility ID:	12275	**CERR Code:**	
Facility SIC Code:	7216	**TOGT:**	1.2
CO:	19	**ROGT:**	0
Air Basin:	SC	**COT:**	
District:	SC	**NOXT:**	
COID:	LA	**SOXT:**	
DISN:	SOUTH COAST AQMD	**PMT:**	
CHAPIS:		**PM10T:**	

1987 Toxic Data

Facility ID:	12275	**COID:**	LA
Facility SIC Code:	7216	**DISN:**	SOUTH COAST AQMD
CO:	19	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

1990 Criteria Data

Facility ID:	12275	**CERR Code:**	
Facility SIC Code:	7216	**TOGT:**	1.2
CO:	19	**ROGT:**	0
Air Basin:	SC	**COT:**	
District:	SC	**NOXT:**	
COID:	LA	**SOXT:**	
DISN:	SOUTH COAST AQMD	**PMT:**	
CHAPIS:		**PM10T:**	

1990 Toxic Data

Facility ID:	12275	**COID:**	LA
Facility SIC Code:	7216	**DISN:**	SOUTH COAST AQMD
CO:	19	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Non-Cancer Chronic Haz Ind: **Non-Cancer Acute Haz Ind:**						
5	4 of 5	NNW	0.03 / 139.25	226.38 / -1	RALPHS GROCERY #156 10309 W OLYMPIC BLVD # 156 LOS ANGELES CA 90064	LA CITY HAZMAT

Facility ID: FA0017547
Last Run Date: 9/1/2017
Source Name: Active Hazardous Materials (HM) Inventory

5	5 of 5	NNW	0.03 / 139.25	226.38 / -1	CENTURY WEST NORGE VILLAGE 10309 W OLYMPIC BLVD LOS ANGELES CA 90064	LA CITY HAZMAT

Facility ID: FA0011724
Last Run Date: 9/1/2017
Source Name: In-Active Hazardous Materials (HM) Inventory

6	1 of 5	W	0.03 / 168.07	217.32 / -10	SHANE YENIKOMSHIAN 10350 W OLYMPIC BLVD LOS ANGELES CA 90064	HHSS

County: Los Angeles
Pdf File Url: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00026433.pdf

6	2 of 5	W	0.03 / 168.07	217.32 / -10	ARCO - AM/PM MINI MARKET #1251 10350 W OLYMPIC BLVD LOS ANGELES CA 90064	LA CITY HAZMAT

Facility ID: FA0025298
Last Run Date: 9/1/2017
Source Name: In-Active Hazardous Materials (HM) Inventory

6	3 of 5	W	0.03 / 168.07	217.32 / -10	SHANE YENIKOMSHIAN 10350 W OLYMPIC BLVD LOS ANGELES CA	HIST TANK

Owner Name: ARCO PETROLEUM PRODUCTS CO.
Owner Street: 515 SOUTH FLOWER STREET
Owner City: LOS ANGELES
Owner State: CA
Owner Zip: 90071
No of Containers: 5
County: LOS ANGELES
Facility State: CA
Facility Zip: 90064

6	4 of 5	W	0.03 / 168.07	217.32 / -10	ARCO - AM/PM MINI MARKET #1251 10350 W OLYMPIC BLVD LOS ANGELES CA 90064	UST LA CITY

Facility ID: FA0025298
Last Run Date: 9/1/2017
Source Name: In-Active UnderGround Storage Petroleum Tanks (UST) Inventory

6	5 of 5	W	0.03 / 168.07	217.32 / -10	ARCO STATION #1251 10350 OLYMPIC LOS ANGELES CA 90064	WASTE DISCHG

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Global ID: WDR100000242
Facility ID:
Site Code:
Site Facility Type: * WDR SITE
Status: HISTORICAL - WDR
County: LOS ANGELES

7	1 of 1	SSE	0.22 / 1,156.10	203.88 / -24	CROWN CAR WASH 10399 W PICO BLVD LOS ANGELES CA 90064	DELISTED TNK

Facility ID: 23712
County: Los Angeles
Permitting Agency: LOS ANGELES, CITY OF
Original Source: UST
Record Date: 30-JAN-2017
Latitude: 34.0481379
Longitude: -118.415478

8	1 of 1	E	0.25 / 1,320.95	277.02 / 50	TWENTIETH CENTURY FOX FILM CORP 10201 W PICO BLVD LOS ANGELES CA 90064-2606	UST

Facility ID:
Permitting Agency: Los Angeles City Fire Department
County: Los Angeles
Latitude: 34.05183
Longitude: -118.41257

9	1 of 1	NNE	0.44 / 2,306.48	300.45 / 73	CENTURY PLAZA 2025 AVENUE OF THE STARS LOS ANGELES CA 90067	VCP

ESTOR EPA ID: 60002407
Program Type: VOLUNTARY CLEANUP
Status: ACTIVE
Site Type: VOLUNTARY CLEANUP
Envirostor ID: 60002407
Site Code: 301769
Special Program: VOLUNTARY CLEANUP PROGRAM
Acres: NONE SPECIFIED
NTL Priorities List: NO
Funding: SITE PROPONENT
City: LOS ANGELES
ZIP: 90067
County: LOS ANGELES
Assembly District: 54
Senate District: 30
Longitude: -118.4157329
Latitude: 34.0575055
APN: NONE SPECIFIED
Cleanup Status: ACTIVE AS OF 8/22/2016
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=60002407
Cleanup Oversight Agen: DTSC - SITE CLEANUP PROGRAM - LEAD
Potential Media Affected: NONE SPECIFIED
Past Use Caused Contam: NONE SPECIFIED
Potential Contam of Cncrn:
Site Facility Name: CENTURY PLAZA
School District:
Address Description: 2025 AVENUE OF THE STARS
Site History:

10	1 of 1	S	0.44 / 2,323.17	204.24 / -23	HILLCREST-BEVERLY OIL CORP - RANCHO 10460 W PICO BLVD LOS ANGELES CA 90064	DELISTED HAZ

Siteid: 122672
Latitude: 34.044479
Longitude: -118.412285
Original Source: CHAZ
Record Date: 04-JAN-2018

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
11	1 of 1	SSW	0.48 / 2,554.91	204.03 / -23	GLIDDEN PROFESSIONAL #456 10561 W PICO BLVD LOS ANGELES CA 90064	DELISTED HAZ

Siteid: 119712
Latitude: 34.044384
Longitude: -118.420998
Original Source: CHAZ
Record Date: 04-JAN-2018

12	1 of 1	NNE	0.73 / 3,866.78	251.29 / 24	BEVERLY HILLS HIGH SCHOOL 241 MORENO DRIVE BEVERLY HILLS CA 90212	ENVIROSTOR

Estor/EPA ID: 19820129
Site Type: SCHOOL
Site Code: 304411
Ntnl Priority List: NO
Acres: 26 ACRES
Special Program:
Funding: SCHOOL DISTRICT
County: LOS ANGELES
Assembly District: 50
Senate District: 26
Latitude: 34.0613080651513
Longitude: -118.410805463791
Address Desc: 241 MORENO DRIVE
Address Desc 2: 241 Moreno Drive
Clean Up Status: INACTIVE - ACTION REQUIRED AS OF 8/20/2017
Clean Up Oversight Agencies:
School District: BEVERLY HILLS UNIFIED SCHOOL DISTRICT
Program Type: DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY
Past Caused Contamination: EDUCATIONAL SERVICES
APN: 4319001900
Potential Media Affected: SOIL, SOIL VAPOR
Potential Contaminants:

METALS
METHANE
VOLATILE ORGANICS (8260B VOCS)

Site History:

The Site was initially set up in 2003. Site has adjacent oil well production activities. Alleged health effects in former students. DTSC conducted inspection in 2003, then the site became inactive later in 2003.

District submitted EOP Application by email on 01/28/15 and the original app by mail on 01/30/15, proposing improvements and code upgrades to structural, mechanical, electrical and plumbing systems, as well as demolition of facilities and construction of new facilities, including underground parking.

PEA was conducted in June and July of 2015 in two phases at different Areas of Interest (AOIs) across the campus. Elevated concentrations of metals, TPHs, VOCs were detected at various AOIs. The district submitted the PEA report and an Amendment for AOI-1, AOi-2, and AOI-3 on July 31, 2015, proposing to place temporary trailers on portions of AOI-1, AOI-3, and a portion of AOI-6 where no unacceptable risk was identified. DTSC letter on September 2, 2015 states that these areas are suitable for temporary trailer placement.

The District plans to perform renovation to the two buildings within AOI-5 at this stage due to funding limitation. A separate PEA Report for AOI-5 was submitted at DTSC's request. PEA recommends land use restriction and soil vapor monitoring at AOI-5.

Remedial action plan (RAP) for the remainder of the campus is in preparation as of July 2016. DTSC received the draft RAP in October 2016 and provided comments in November 2017. The District then experienced change of management team in January 2017 and then again in June 2017. The new team has different opinions on how to proceed with the RAP, because the City of Beverly Hills is going to construct a subway that goes underneath the campus where an underground garage was originally planned. Project was placed as inactive in August 2017 after DTSC attempts several times to communicate with the district regarding their plan.

Facility Information

Program Type: SCHOOL CLEANUP
Status: INACTIVE - ACTION REQUIRED
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=19820129

Current Activities

Activity Type: Currently Scheduled Activities Through 6/30/2018
Area Name:
Sub Area:
Due Date: 8/12/2016
Revised Date: 11/25/2017
Document Type: Remedial Action Plan

Activity Type: Currently Scheduled Activities Through 6/30/2018
Area Name:
Sub Area:
Due Date: 11/9/2016
Revised Date: 12/7/2017
Document Type: Public Notice

Activity Type: Currently Scheduled Activities Through 6/30/2018
Area Name:
Sub Area:
Due Date: 8/5/2016
Revised Date: 7/4/2018
Document Type: Land Use Restriction

Completed Activities

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 10/8/2015
Document Type: Preliminary Endangerment Assessment Report
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&doc_id=60390237
Comments: DTSC approved the PEA with a Further Action determination.

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 1/30/2015
Document Type: Environmental Oversight Agreement Application
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&doc_id=60388817
Comments: Received EOP Application via email 01/28/2015 by mail on 01/30/15.

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 10/15/2015
Document Type: Fact Sheets
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&doc_id=60399334
Comments:

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 10/15/2015
Document Type: Public Notice
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&doc_id=60399336
Comments: DTSC released the RAW for public review on 10/16/2015

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 1/7/2016
Document Type: Removal Action Completion Report
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&doc_id=60403885
Comments: DTSC approved the Removal Action Completion Report.

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 9/16/2015

Document Type: Annual Oversight Cost Estimate
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&enforcement_id=60399341
Comments: DTSC cost estimated was conducted on 9/11/2015 by Shahir Haddad and Scarlett Zhai.

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 11/17/2015
Document Type: CEQA - Notice of Exemption
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&enforcement_id=60399331
Comments: DTSC OPEA filed the Notice of Exemption with the State Clearing House.

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 7/13/2015
Document Type: Preliminary Endangerment Assessment Workplan
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&doc_id=60394825
Comments: The district's PEA field work incorporated DTSC's comments. The consultant indicated that the comments will be addressed in preparation of PEA report and no revision to PEA workplan will be performed.

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 11/23/2015
Document Type: Removal Action Workplan
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&doc_id=60396253
Comments: DTSC approved the Removal Action Workplan for implementation

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 1/5/2017
Document Type: Other Report
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&doc_id=60421705
Comments:

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 2/18/2015
Document Type: Environmental Oversight Agreement
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&enforcement_id=60388843
Comments: Fully executed EOA sent (FedEx) to District.

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 5/8/2003
Document Type: Site Inspections/Visit (Non LUR)
Doc Link:
Comments:

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 8/23/2016
Document Type: Preliminary Endangerment Assessment Report
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&doc_id=60409714
Comments: DTSC approved the PEA with a Further Action determination.

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 6/18/2015
Document Type: Preliminary Endangerment Assessment Workplan
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&doc_id=60388942
Comments: The PEA investigation field work incorporated DTSC's comments. The District will address DTSC's comments on PEA Workplan during preparation of PEA report.

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 8/12/2015
Document Type: School Cleanup Agreement
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&enforcement_id=60396454
Comments: Sent copy of fully executed SCA to District via regular mail.

Activity Type: Completed Activities
Area Name:
Sub Area:
Date Completed: 9/13/2016
Document Type: Annual Oversight Cost Estimate
Doc Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19820129&enforcement_id=60417603
Comments: Annual Cost Estimate Letter, dated 9/13/16, sent to RP.

Unplottable Summary

Total: 6 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
CERS HAZ	7-Eleven 39477	39477 W OLYMPIC BLVD	LOS ANGELES CA	90019	864930143
CLEANUP SITES	KINDER-MORGAN SECTION 23 PIPELINES	9600 ALAMEDA ST NEAR MISSOURI AVE	LOS ANGELES CA	90001	820147248
EMISSIONS	CHEVRON U.S.A. INC	12040 CENTURY PARK EAST	WEST LOS ANGELES CA	90212	861174264
HHSS	TENNESSEE AVE VAULT	TENNESSEE AVE. KERWOOD AVE	LOS ANGELES CA	90017	822948129
HIST TANK	SERVICE STATION 3019	12(NOT LEGIBLE)00 W OLYMPIC BOULEVARD	LOS ANGELES CA		865092016
HIST TANK	TENNESSEE AVE. VAULT	TENNESSEE AVE.	LOS ANGELES CA		865080700

Unplottable Report

Site: ***7-Eleven 39477***
39477 W OLYMPIC BLVD LOS ANGELES CA 90019 CERS HAZ

Site ID: 87825
Latitude: 34.053420
Longitude: -118.319610

Regulated Programs

EI ID: 10462420 ***EI Description:*** Chemical Storage Facilities

Affiliations

Affil Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title:
Address: 3477 W OLYMPIC BLVD
City: LOS ANGELES
State: CA
Country:
Zip Code: 90019
Phone:

Affil Type Desc: Parent Corporation
Entity Name: 7-Eleven #39477
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Secondary Emergency Contact
Entity Name: DISPATCH 1
Entity Title: DISPATCH 1
Address:
City:
State:
Country:
Zip Code:
Phone: (972) 828-0711

Affil Type Desc: CUPA District
Entity Name: Los Angeles City Fire Department
Entity Title:
Address: 200 North Main Street, Room 1780
City: Los Angeles
State: CA
Country:
Zip Code: 90012
Phone: (213) 978-3680

Affil Type Desc: Legal Owner
Entity Name: SHARON RUIZ
Entity Title:
Address: 39477 W OLYMPIC BLVD
City: LOS ANGELES
State: CA
Country: United States

Zip Code:	90019
Phone:	(323) 737-3049

Affil Type Desc:	Property Owner
Entity Name:	7-ELEVEN INC.
Entity Title:	
Address:	LICENSE RENEWAL DEPT.:3200 HACKBERRY ROAD
City:	IRVING
State:	TX
Country:	United States
Zip Code:	75063
Phone:	(972) 828-7619

Affil Type Desc:	Primary Emergency Contact
Entity Name:	BRENT SMERCZYNSKI
Entity Title:	CORPORATE ASSET PROTECTION MANAGER
Address:	
City:	
State:	
Country:	
Zip Code:	
Phone:	(214) 549-3851

Affil Type Desc:	Environmental Contact
Entity Name:	SHARON RUIZ
Entity Title:	
Address:	3477 W OLYMPIC BLVD
City:	LOS ANGELES
State:	CA
Country:	
Zip Code:	90019
Phone:	(323) 737-3049

Affil Type Desc:	Identification Signer
Entity Name:	BRENT SMERCZYNSKI
Entity Title:	CORPORATE ASSET PROTECTION MANAGER
Address:	
City:	
State:	
Country:	
Zip Code:	
Phone:	

Affil Type Desc:	Operator
Entity Name:	H & R CORPORATION (DBA: 7-Eleven 39477)
Entity Title:	
Address:	
City:	
State:	
Country:	
Zip Code:	
Phone:	(323) 737-3049

Affil Type Desc:	Document Preparer
Entity Name:	BELSHIRE ENVIRONMENTAL SERVICES, INC.
Entity Title:	
Address:	
City:	
State:	
Country:	
Zip Code:	
Phone:	

Site: ***KINDER-MORGAN SECTION 23 PIPELINES***
9600 ALAMEDA ST NEAR MISSOURI AVE LOS ANGELES CA 90001

CLEANUP SITES

Global ID:	SL204DP2396	***CUF Case:***	NO
Case Type:	Cleanup Program Site	***Begin Date:***	2000-05-23 00:00:00
Status:	Completed - Case Closed	***How Discovered:***	
Status Date:	2002-12-06 00:00:00	***Stop Method:***	

RB Case No:	0946A	***County:***	Los Angeles
LOC Case No:		***Latitude:***	34.046575
Lead Agency:	LOS ANGELES RWQCB (REGION 4)	***Longitude:***	-118.438123
Case Worker:	SH	***File Location:***	
Local Agency:			
Potential Cntm of Concrn:			
Potential Media Affected:			
How Discovered Description:			
Stop Description:			
Cal Water Watershed Name:	Santa Monica Bay - Interior Santa Monica Bay - Culver City (404.61)		
DWR Groundwater Subbasin Name:	Coastal Plain Of Los Angeles - Santa Monica (4-11.01)		
Site History:			

Status History

Status:	Completed - Case Closed	***Status Date:***	2002-12-06 00:00:00
Status:	Open - Case Begin Date	***Status Date:***	2000-05-23 00:00:00

Activities

Action Type:	ENFORCEMENT
Action:	Closure/No Further Action Letter
Date:	2002-12-06 00:00:00
Action Type:	ENFORCEMENT
Action:	Staff Letter
Date:	2000-05-23 00:00:00
Action Type:	Other
Action:	Leak Reported
Date:	1965-01-02 00:00:00

Contacts

Contact Type:	Regional Board Caseworker	***City:***	LOS ANGELES
Contact Name:	SU HAN	***Email:***	su.han@waterboards.ca.gov
Organization Name:	LOS ANGELES RWQCB (REGION 4)	***Phone No:***	2135766735
Address:	320 W. 4TH STREET, SUITE 200		

Site: ***CHEVRON U.S.A. INC***
12040 CENTURY PARK EAST WEST LOS ANGELES CA 90212

EMISSIONS

1987 Criteria Data

Facility ID:	9301	***CERR Code:***	
Facility SIC Code:	1311	***TOGT:***	15
CO:	19	***ROGT:***	14.31
Air Basin:	SC	***COT:***	
District:	SC	***NOXT:***	
COID:	LA	***SOXT:***	
DISN:	SOUTH COAST AQMD	***PMT:***	
CHAPIS:		***PM10T:***	

1987 Toxic Data

Facility ID:	9301	***COID:***	LA
Facility SIC Code:	1311	***DISN:***	SOUTH COAST AQMD
CO:	19	***CHAPIS:***	
Air Basin:	SC	***CERR Code:***	
District:	SC		
TS:			
Health Risk Asmt:			

Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:

Site: ***TENNESSEE AVE VAULT***
TENNESSEE AVE. KERWOOD AVE LOS ANGELES CA 90017 HHSS

County: Los Angeles
Pdf File Url: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002814a.pdf

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Site: ***SERVICE STATION 3019***
12(NOT LEGIBLE)00 W OLYMPIC BOULEVARD LOS ANGELES CA HIST TANK

Owner Name:	UNION OIL COMPANY OF CALIF.	***No of Containers:***	4
Owner Street:	3701 WILSHIRE BOULEVARD ST 830	***County:***	LOS ANGELES
Owner City:	LOS ANGELES	***Facility State:***	CA
Owner State:	CA	***Facility Zip:***	90064
Owner Zip:	90010		

Site: ***TENNESSEE AVE. VAULT***
TENNESSEE AVE. LOS ANGELES CA HIST TANK

Owner Name:	UNION OIL COMPANY OF CALIFORNI	***No of Containers:***	1
Owner Street:	461 S. BOYLSTON	***County:***	LOS ANGELES
Owner City:	LOS ANGELES	***Facility State:***	CA
Owner State:	CA	***Facility Zip:***	90017
Owner Zip:	90017		

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

National Priorities List (Superfund)-NPL: EPA's (United States Environmental Protection Agency) list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action.

Government Publication Date: Feb 6, 2018

National Priority List - Proposed: PROPOSED NPL

Includes sites proposed (by the EPA, the state, or concerned citizens) for addition to the NPL due to contamination by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.

Government Publication Date: Feb 6, 2018

Deleted NPL: DELETED NPL

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Government Publication Date: Feb 6, 2018

SEMS List 8R Active Site Inventory: SEMS

The Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted.

Government Publication Date: Apr 11, 2018

SEMS List 8R Archive Sites: SEMS ARCHIVE

The Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Government Publication Date: Apr 11, 2018

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Jan 24, 2018

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Government Publication Date: Jan 24, 2018

RCRA Generator List: RCRA LQG

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Jan 24, 2018

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Jan 24, 2018

RCRA Conditionally Exempt Small Quantity Generators List: RCRA CESQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Conditionally Exempt Small Quantity Generators (CESQG) generate 100 kilograms or less per month of hazardous waste or one kilogram or less per month of acutely hazardous waste.

Government Publication Date: Jan 24, 2018

RCRA Non-Generators: RCRA NON GEN

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Jan 24, 2018

Federal Engineering Controls-ECs: FED ENG

Engineering controls (ECs) encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 20, 2016

Federal Institutional Controls- ICs: FED INST

Institutional controls are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's (United States Environmental Protection Agency) expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site.

Government Publication Date: Jan 20, 2016

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Feb 8, 2017

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Feb 20, 2018

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

LIEN on Property: SEMS LIEN

The EPA Superfund Enterprise Management System (SEMS) provides LIEN information on properties under the EPA Superfund Program.

Government Publication Date: Apr 11, 2018

State

State Response Sites: RESPONSE

A list of identified confirmed release sites where the Department of Toxic Substances Control (DTSC) is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk. This database is state equivalent NPL.

Government Publication Date: Sep 22, 2017

EnviroStor Database: ENVIROSTOR

The EnviroStor Data Management System is made available by the Department of Toxic Substances Control (DTSC). Includes Corrective Action sites, Tiered Permit sites, Historical Sites and Evaluation/Investigation sites. This database is state equivalent CERCLIS.
Government Publication Date: Dec 21, 2017

Delisted EnviroStor Database: DELISTED ENVS

Sites removed from the list of facilities made available by the EnviroStor Data Management System, Department of Toxic Substances Control (DTSC).
Government Publication Date: Sep 22, 2017

Solid Waste Information System (SWIS): SWF/LF

The Solid Waste Information System (SWIS) database made available by the Department of Resources Recycling and Recovery (CalRecycle) contains information on solid waste facilities, operations, and disposal sites throughout the State of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites.
Government Publication Date: Jan 31, 2018

EnviroStor Hazardous Waste Facilities: HWP

A list of hazardous waste facilities including permitted, post-closure and historical facilities found in the Department of Toxic Substances Control (DTSC) EnviroStor database.
Government Publication Date: Jan 30, 2018

Land Disposal Sites: LDS

Land Disposal Sites in GeoTracker, the State Water Resources Control Board (SWRCB)'s data management system. The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units. Waste management units include waste piles, surface impoundments, and landfills.
Government Publication Date: Dec 04, 2017

Leaking Underground Fuel Tank Reports: LUST

List of Leaking Underground Storage Tanks within the Cleanup Sites data in GeoTracker database. GeoTracker is the State Water Resources Control Board's (SWRCB) data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (Underground Storage Tanks, Department of Defense and Site Cleanup Program) as well as permitted facilities such as operating Underground Storage Tanks. The Leak Prevention Program that overlooks LUST sites is the SWRCB in California's Environmental Protection Agency.
Government Publication Date: Apr 3, 2018

Delisted Leaking Storage Tanks: DELISTED LST

List of Leaking Underground Storage Tanks (LUST) cleanup sites removed from GeoTracker, the State Water Resources Control Board (SWRCB)'s database system, as well as sites removed from the SWRCB's list of UST Case closures.
Government Publication Date: Apr 3, 2018

Permitted Underground Storage Tank (UST) in GeoTracker: UST

List of Permitted Underground Storage Tank (UST) sites made available by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency (EPA).
Government Publication Date: Mar 11, 2018

Proposed Closure of Underground Storage Tank Cases: UST CLOSURE

List of UST cases that are being considered for closure by either the California Environmental Protection Agency, State Water Resources Control Board or the Executive Director that have been posted for a 60-day public comment period.
Government Publication Date: Jan 31, 2018

Historical Hazardous Substance Storage Information Database: HHSS

The Historical Hazardous Substance Storage database contains information collected in the 1980s from facilities that stored hazardous substances. The information was originally collected on paper forms, was later transferred to microfiche, and recently indexed as a searchable database. When using this database, please be aware that it is based upon self-reported information submitted by facilities which has not been independently verified. It is unlikely that every facility responded to the survey and the database should not be expected to be a complete inventory of all facilities that were operating at that time. This database is maintained by the California State Water Resources Control Board's (SWRCB) Geotracker.
Government Publication Date: Aug 27, 2015

Aboveground Storage Tanks: AST

A statewide list from 2009 of aboveground storage tanks (ASTs) made available by the Cal FIRE Office of the State Fire Marshal (OSFM). This list is no longer maintained or updated by the Cal FIRE OSFM.

Government Publication Date: Aug 31, 2009

Delisted Storage Tanks: DELISTED TNK

This database contains a list of storage tank sites that were removed by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency (EPA) and the Cal FIRE Office of State Fire Marshal (OSFM).

Government Publication Date: Mar 11, 2018

California Environmental Reporting System (CERS) Tanks: CERS TANK

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs. The CalEPA oversees the statewide implementation of the Unified Program which applies regulatory standards to protect Californians from hazardous waste and materials.

Government Publication Date: Mar 22, 2018

Delisted Environmental Reporting System (CERS) Hazardous Waste Sites: DELISTED HAZ

This database contains a list of sites that were removed from the California Environmental Protection Agency (CalEPA) in the following regulatory programs: Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, RCRA LQ HW Generator.

Government Publication Date: Mar 22, 2018

Site Mitigation and Brownfields Reuse Program Facility Sites with Land Use Restrictions: LUR

The Department of Toxic Substances Control (DTSC) Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents land use restrictions that are active. Some sites have multiple land use restrictions.

Government Publication Date: Sep 12, 2017

Hazardous Waste Management Program Facility Sites with Deed / Land Use Restrictions: HLUR

The Department of Toxic Substances Control (DTSC) Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Government Publication Date: Feb 18, 2018

Deed Restrictions and Land Use Restrictions: DEED

List of Deed Restrictions, Land Use Restrictions and Covenants in GeoTracker made available by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency. A deed restriction (land use covenant) may be required to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to residual hazardous materials.

Government Publication Date: Jan 11, 2018

Voluntary Cleanup Program: VCP

List of sites in the Voluntary Cleanup Program made available by the Department of Toxic Substances and Control (DTSC). The Voluntary Cleanup Program was designed to respond to lower priority sites. Under the Voluntary Cleanup Program, DTSC enters site-specific agreements with project proponents for DTSC oversight of site assessment, investigation, and/or removal or remediation activities, and the project proponents agree to pay DTSC's reasonable costs for those services.

Government Publication Date: Sep 7, 2017

GeoTracker Cleanup Sites Data: CLEANUP SITES

A list of cleanup sites in the state of California made available by The State Water Resources Control Board (SWRCB) of the California Environmental Protection Agency (EPA). SWRCB tracks leaking underground storage tank cleanups as well as other water board cleanups.

Government Publication Date: Apr 3, 2018

California Environmental Reporting System (CERS) Hazardous Waste Sites: CERS HAZ

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the following regulatory programs: Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, RCRA LQ HW Generator. The CalEPA oversees the statewide implementation of the Unified Program which applies regulatory standards to protect Californians from hazardous waste and materials.

Government Publication Date: Mar 22, 2018

Delisted California Environmental Reporting System (CERS) Tanks: DELISTED CTNK

This database contains a list of Aboveground Petroleum Storage and Underground Storage Tank sites that were removed from in the California Environmental Protection Agency (CalEPA) Regulated Site Portal.

Government Publication Date: Mar 22, 2018

Historical Hazardous Substance Storage Container Information - Facility Summary: HIST TANK

The State Water Resources Control Board maintained the Hazardous Substance Storage Containers listing and inventory in th 1980s. This facility summary lists historic tank sites where the following container types were present: farm motor vehicle fuel tanks; waste tanks; sumps; pits, ponds, lagoons, and others; and all other product tanks. This set, published in May 1988, lists facility and owner information, as well as the number of containers. This data is historic and will not be updated.

Government Publication Date: May 27, 1988

Tribal

Leaking Underground Storage Tanks (LUSTs) on Indian Lands: INDIAN LUST

LUSTs on Tribal/Indian Lands in Region 9, which includes California.

Government Publication Date: Dec 31, 2017

Underground Storage Tanks (USTs) on Indian Lands: INDIAN UST

USTs on Tribal/Indian Lands in Region 9, which includes California.

Government Publication Date: Dec 31, 2017

Delisted Tribal Leaking Storage Tanks: DELISTED ILST

Leaking Underground Storage Tank facilities which have been removed from the Regional Tribal LUST lists made available by the EPA.

Government Publication Date: Oct 14, 2017

Delisted Tribal Underground Storage Tanks: DELISTED IUST

Underground Storage Tank facilities which have been removed from the Regional Tribal UST lists made available by the EPA.

Government Publication Date: Oct 14, 2017

County

Delisted County Records: DELISTED COUNTY

Records removed from county or CUPA databases. Records may be removed from the county lists made available by the respective county departments because they are inactive, or because they have been deemed to be below reportable thresholds.

Government Publication Date: Apr 20, 2018

Los Angeles County - Burbank City CUPA List: BURBANK CUPA

A list of facilities associated with various Certified Unified Program Agency (CUPA) programs in the City of Burbank. This list is made available by the City of Burbank Fire Department.

Government Publication Date: Feb 15, 2018

Los Angeles County - El Segundo City Underground Storage Tanks List: ELSEGUNDO UST

List of registered Underground Storage Tanks (USTs) in the City of El Segundo of Los Angeles County, made available by El Segundo City Fire Department.

Government Publication Date: Jan 17, 2017

Los Angeles County - Santa Fe Springs Underground Storage Tank: SANTAFESP UST

A list of registered active Underground Storage Tanks (USTs) in the City of Santa Fe Springs. This list is made available by Santa Fe Springs Department of Fire-Rescue.

Government Publication Date: Jun 30, 2017

Los Angeles County - Santa Monica City Aboveground Storage Tank List: SANTAMON AST

List of registered Aboveground Storage Tanks (ASTs) made available by the Santa Monica Fire Department in the City of Santa Monica of Los Angeles County, California.

Government Publication Date: Mar 13, 2017

Los Angeles County - Santa Monica City CUPA Facilities List: SANTAMON CUPA

The Santa Monica Fire Department's office maintains a list of CUPA Facilities located in Santa Monica city.

Government Publication Date: Mar 23, 2017

Los Angeles County - Santa Monica City Hazardous Materials Facilities: SANTAMON HAZ

A list of Hazardous Materials Facilities in the City of Santa Monica, Los Angeles county. This list is made available by Santa Monica Fire Prevention Division which has been designated as the CUPA for the City.

Government Publication Date: Mar 13, 2017

Los Angeles County - Santa Monica City Hazardous Waste Facilities: SANTAMON HW

A list of Hazardous Waste Facilities in Los Angeles County, City of Santa Monica. This list is made available by Santa Monica Fire Prevention Division.

Government Publication Date: Mar 13, 2017

Los Angeles County - Santa Monica City Underground Storage Tank List: SANTA MONICA UST

A list of registered active Underground Storage Tanks (USTs) in the City of Santa Monica made available by Santa Monica Fire Prevention Division.

Government Publication Date: Nov 16, 2017

Los Angeles County - Torrance City Underground Storage Tanks: TORRANCE UST

A list of registered Underground Storage Tank (UST) sites in Torrance City of Los Angeles County. This list is made available by Torrance City Office of Clerk.

Government Publication Date: Mar 19, 2018

Los Angeles County - Vernon City CUPA List: VERNON CUPA

The Vernon City Fire Department's office maintains a list of CUPA Facilities located in Vernon city.

Government Publication Date: Dec 11, 2017

Los Angeles County - Vernon City UST List: VERNON UST

A list of Underground Storage Tanks (UST) in Vernon City provided by the Vernon City Fire Department.

Government Publication Date: Dec 11, 2017

Los Angeles County HMS List: LA HMS

List of sites in the Los Angeles County Department of Public Works Hazardous Materials System (HMS) Database which have or have had permits for Industrial Waste, Underground Storage Tanks, or Stormwater in the county of Los Angeles.

Government Publication Date: Jan 25, 2018

Los Angeles County Long Beach UST List: LA LONGB UST

List of registered Underground Storage Tanks (USTs) in the City of Long Beach, Los Angeles County, made available by the Long Beach Certified Unified Program Agency (CUPA). The Long Beach CUPA operates under oversight shared by the Long Beach Fire Department and Health Department.

Government Publication Date: Mar 15, 2017

Los Angeles County Solid Waste Sites: LA SWF

List of permitted solid waste facilities, closed landfills, historical dumpsites and other solid waste sites in Los Angeles County, made available by the Department of Public Works in Los Angeles County.

Government Publication Date: Jan 25, 2018

Los Angeles County - City of Los Angeles UST List: UST LA CITY

A list of active and inactive underground storage tank facilities made available by the Los Angeles Fire Department CUPA.

Government Publication Date: Sep 01, 2017

Los Angeles County - City of Los Angeles AST List: AST LA CITY

A list of active and inactive above ground petroleum storage tanks made available by the Los Angeles Fire Department CUPA.

Government Publication Date: Sep 01, 2017

Los Angeles County - City of Los Angeles Hazardous Materials Facilities: LA CITY HAZMAT

A list of active and inactive hazardous materials facilities made available by the Los Angeles Fire Department CUPA.

Government Publication Date: Sep 01, 2017

Additional Environmental Record Sources

Federal

Facility Registry Service/Facility Index: FINDS/FRS

The US Environmental Protection Agency (EPA)'s Facility Registry System (FRS) is a centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, data collected from EPA's Central Data Exchange registrations and data management personnel.

Government Publication Date: Dec 12, 2017

Toxics Release Inventory (TRI) Program: TRIS

The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Dec 31, 2016

Hazardous Materials Information Reporting System: HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Sep 11, 2017

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department") provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Dec 21, 2017

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA of the Act) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified ongressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

Toxic Substances Control Act: TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Jun 30, 2017

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.
Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.
Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.
Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the cleanup process, the Environmental Protection Agency (EPA) conducts a search to find the potentially responsible parties (PRPs). EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site.
Government Publication Date: Oct 10, 2017

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.
Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) is a system that provides information for the Federal Enforcement and Compliance (FE&C) and the National Pollutant Discharge Elimination System (NPDES) programs. The FE&C component supports the Environmental Protection Agency's (EPA) Civil Enforcement and Compliance program activities. These activities include Compliance Assistance, Compliance Monitoring and Enforcement. The NPDES program supports tracking of NPDES permits, limits, discharge monitoring data and other program reports.
Government Publication Date: Nov 18, 2016

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from the Integrated Compliance Information System (ICIS). The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.
Government Publication Date: Sep 14, 2016

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).
Government Publication Date: Sep 14, 2016

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DoD) is responsible for an environmental restoration. This list is published by the U.S. Army Corps of Engineers.
Government Publication Date: Nov 22, 2016

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: Sep 13, 2016

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) contains mine identification numbers issued by the Department of Labor Mine Safety and Health Administration (MSHA) for mines active or opened since 1971. Note that addresses may or may not correspond with the physical location of the mine itself.

Government Publication Date: Jul 31, 2017

Alternative Fueling Stations: ALT FUELS

List of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE). The National Renewable Energy Laboratory (NREL) obtains information about new stations from trade media, Clean Cities coordinators, a Submit New Station form on the Station Locator website, and through collaborating with infrastructure equipment and fuel providers, original equipment manufacturers (OEMs), and industry groups.

Government Publication Date: Feb 6, 2018

Superfund Decision Documents: SUPERFUND ROD

This database contains a listing of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD), along with other associated memos and files. This information is maintained and made available by the US EPA (Environmental Protection Agency).

Government Publication Date: Apr 11, 2018

Registered Pesticide Establishments: SSTS

List of active EPA-registered foreign and domestic pesticide-producing and device-producing establishments based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that facilities producing pesticides, active ingredients, or devices be registered. The list of establishments is made available by the EPA.

Government Publication Date: Mar 1, 2018

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Nov 30, 2017

State

EnviroStor Inspection, Compliance, and Enforcement: INSP COMP ENF

A list of permitted facilities with inspections and enforcements tracked in the Department of Toxic Substance Control (DTSC) EnviroStor.

Government Publication Date: Nov 24, 2017

Clandestine Drug Lab Sites: CDL

The Department of Toxic Substances Control (DTSC) maintains a listing of drug lab sites. DTSC is responsible for removal and disposal of hazardous substances discovered by law enforcement officials while investigating illegal/clandestine drug laboratories.

Government Publication Date: Jun 30, 2017

School Property Evaluation Program Sites: SCH

A list of sites registered with The Department of Toxic Substances Control (DTSC) School Property Evaluation and Cleanup (SPEC) Division. SPEC is responsible for assessing, investigating and cleaning up proposed school sites. The Division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy the new school.

Government Publication Date: Sep 20, 2017

California Hazardous Material Incident Report System (CHMIRS): CHMIRS

A list of reported hazardous material incidents, spills, and releases from the California Hazardous Material Incident Report System (CHMIRS). This list has been made available by the California Office of Emergency Services (OES).

Government Publication Date: Aug 21, 2017

Sites Listed in the Solid Waste Assessment Test (SWAT) Program Report: SWAT

In a 1993 Memorandum of Understanding, the State Water Resources Control Board (SWRCB) agreed to submit a comprehensive report on the Solid Waste Assessment Test (SWAT) Program to the California Integrated Waste Management Board (CIWMB). This report summarizes the work completed to date on the SWAT Program, and addresses both the impacts that leakage from solid waste disposal sites (SWDS) may have upon waters of the State and the actions taken to address such leakage.

Government Publication Date: Dec 31, 1995

Hazardous Waste Manifest Data: HAZNET

A list of hazardous waste manifests received each year by Department of Toxic Substances Control (DTSC). The volume of manifests is typically 900,000 - 1,000,000 annually, representing approximately 450,000 - 500,000 shipments.

Government Publication Date: Oct 24, 2016

Solid Waste Disposal Sites with Waste Constituents Above Hazardous Waste Levels: SWRCB SWF

This is a list of solid waste disposal sites identified by California State Water Resources Control Board with waste constituents above hazardous waste levels outside the waste management unit.

Government Publication Date: Sep 20, 2006

Hazardous Waste and Substances Site List - Site Cleanup: HWSS CLEANUP

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. This list is published by California Department of Toxic Substance Control.

Government Publication Date: Feb 1, 2018

List of Hazardous Waste Facilities Subject to Corrective Action: DTSC HWF

This is a list of hazardous waste facilities identified in Health and Safety Code (HSC) § 25187.5. These facilities are those where Department of Toxic Substances Control (DTSC) has taken or contracted for corrective action because a facility owner/operator has failed to comply with a date for taking corrective action in an order issued under HSC § 25187, or because DTSC determined that immediate corrective action was necessary to abate an imminent or substantial endangerment.

Government Publication Date: Jul 18, 2016

Historical Hazardous Waste Manifest Data: HIST MANIFEST

A list of historic hazardous waste manifests received by the Department of Toxic Substances Control (DTSC) from year the 1980 to 1992. The volume of manifests is typically 900,000 - 1,000,000 annually, representing approximately 450,000 - 500,000 shipments.

Government Publication Date: Dec 31, 1992

Historical California Hazardous Material Incident Report System (CHMIRS): HIST CHMIRS

A list of reported hazardous material incidents, spills, and releases from the California Hazardous Material Incident Report System (CHMIRS) prior to 1993. This list has been made available by the California Office of Emergency Services (OES).

Government Publication Date: Jan 1, 1993

Historical Cortese List: HIST CORTESE

List of sites which were once included on the Cortese list. The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements for providing information about the location of hazardous sites.

Government Publication Date: Nov 13, 2008

Cease and Desist Orders and Cleanup and Abatement Orders: CDO/CAO

The California Environment Protection Agency "Cortese List" of active Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO). This list contains many CDOs and CAOs that do NOT concern the discharge of wastes that are hazardous materials. Many of the listed orders concern, as examples, discharges of domestic sewage, food processing wastes, or sediment that do not contain hazardous materials, but the Water Boards' database does not distinguish between these types of orders.

Government Publication Date: Feb 16, 2012

Drycleaner Facilities: DRYCLEANERS

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial, linen supply, commercial laundry, dry cleaning and pressing machines - Coin Operated Laundry and Dry Cleaning. This is provided by the Department of Toxic Substance Control.

Government Publication Date: Jan 18, 2018

Delisted Drycleaners: DELISTED DRYC

Sites removed from the list of drycleaner related facilities that have EPA ID numbers, made available by the California Department of Toxic Substance Control.

Government Publication Date: Jan 18, 2018

Waste Discharge Requirements: WASTE DISCHG

List of sites in California State Water Resources Control Board (SWRCB) Waste Discharge Requirements (WDRs) Program in California, made available by the SWRCB via GeoTracker. The WDR program regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Government Publication Date: Oct 3, 2017

Toxic Pollutant Emissions Facilities: EMISSIONS

A list of criteria and toxic pollutant emissions data for facilities in California made available by the California Environmental Protection Agency - Air Resources Board (ARB). Risk data may be based on previous inventory submittals. The toxics data are submitted to the ARB by the local air districts as requirement of the Air Toxics "Hot Spots" Program. This program requires emission inventory updates every four years.

Government Publication Date: Dec 31, 2015

Tribal

No Tribal additional environmental record sources available for this State.

County

Los Angeles County Site Mitigation List: LA SML

A Site Mitigation List in the County of Los Angeles. The list is made available by Los Angeles County Fire Department. Site mitigation is handled by the Site Mitigation Unit (SMU) which facilitates completion of site clean-up projects of contaminated sites in an expeditious manner in all cities of the Los Angeles County except El Segundo, Glendale, Long Beach, Santa Fe Springs, and Vernon.

Government Publication Date: Nov 30, 2017

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

CONVERSE CONSULTANTS

Phase II Environmental Site Assessment Report

10330-10384 Bellwood Avenue
Los Angeles, California

Converse Project No. 18-41-139-02
May 31, 2018

Prepared For:

SBLP Century City, LLC
4514 Cole Avenue, Suite 1500
Dallas, Texas 75205

Prepared By:

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Converse Consultants
Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

May 31, 2018

Mr. Patrick McGonigle
SBLP Century City, LLC
4514 Cole Avenue, Suite 1500
Dallas, Texas 75205

Subject: **PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT**
10330-10384 ½ Bellwood Avenue
Los Angeles, California
Converse Project No. 18-41-139-02

Mr. McGonigle:

Converse Consultants (Converse) is pleased to submit the attached report that summarizes the activities and the results of a *Phase II Environmental Site Assessment (Phase II ESA)* that was conducted at the referenced property.

We appreciate the opportunity to be of service. Should you have any questions or comments regarding this report, please contact Norman Eke at (626) 930-1260.

CONVERSE CONSULTANTS

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1.0 Introduction

This Report presents the results of the Converse Consultants (Converse) *Phase II Environmental Site Assessment* (*ESA*) that was performed at 10330-10384 ½ Bellwood Avenue in the City of Los Angeles, Los Angeles County, California, referred to as the Site in this report. Converse was retained on behalf of SBLP Century City, LLC (*User*) to conduct the *Phase II ESA* at the Site. The location of the Site is shown on Figure 1, Site Location Map.

Converse completed a Transaction Screen Process (TSP) Report, Phase II ESA, and Human Health Screen Evaluation (HSSE) in 2012, and a supplementary Phase II ESA in 2017. Based on the results of the assessments/evaluations, Converse identified the following recognized environmental conditions (RECs) in connection with the Site:

- The identified presence of tetrachloroethylene (PCE) in soil-vapor at levels in excess of screening levels for residential land use, as reported in previous Phase II ESAs completed at the Site.
- The identification of a former gas and oil service station and auto repair business on the northern adjoining property (10344 W. Olympic Boulevard).
- The identification of an existing dry cleaning business (Michael's Cleaners) and smog check and oil change business on the northern adjoining property (10344-10344 1/2 W. Olympic Boulevard).
- The Site is located within a City-designated methane zone.
- A vapor encroachment condition exists for the Site.

Converse completed the Phase II to further evaluate the impacts to soil and soil vapor beneath the Site due to past and current operations at the northern adjoining property. In addition, Converse conducted an initial screening to evaluate whether methane was present in soil-vapor. Converse also conducted a Phase I ESA concurrently, under separate title.

Converse generally followed the standard practices of the American Society for Testing Materials (ASTM) Designation: E1903-11 *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process* (ASTM, E 1903-11). The purpose of conducting the *Phase II ESA* in accordance with ASTM E1903-11 is to acquire and evaluate information sufficient to achieve the objective(s) set forth in the "Statement of Objectives" developed by the *User* and Converse. The objectives of the assessment were to:

- Evaluate the RECs in connection with the adjoining properties that were identified during the Phase I ESA and past environmental assessments;
- Conduct an initial screening of the Site for methane; and
- Identify if potential target analytes are present at concentrations greater than threshold criteria.

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2.0 Background

2.1 Site Description and Features

Details in the following sections regarding the Site and surrounding areas were obtained from the Converse Phase I ESA dated May 15, 2018.

2.1.1 Current Uses of the Site

The Site is owned by V&L Property Management, and is currently developed with 12 residential buildings consisting of 112 residential apartment units.

- 10340 Bellwood Avenue is comprised of two, two-story structures
- 10341 Bellwood Avenue is comprised of one, two-story structures
- 10350 Bellwood Avenue is comprised of two, two-story structures
- 10355 Bellwood Avenue is comprised of one, two-story structure
- 10358 Bellwood Avenue is comprised of two, two-story structures
- 10366 Bellwood Avenue is comprised of two, two-story structures
- 10368-10384 1/2 Bellwood Avenue is comprised of 17 bungalows

In addition, there are four (4) residential garage structures, two (2) parking lots, and two (2) pool facilities.

2.1.2 Location and Legal Description

The Site is located at 10330-10384 ½ Bellwood Avenue in the City of Los Angeles. The Site structures are located on the north and south sides of Bellwood Avenue, southeast of West Olympic Boulevard. The Site is located approximately 1.3-miles north of Interstate 10 (Santa Monica Freeway) and 1.5-mile east of the 405 (San Diego) Freeway.

The Site consists of 3 parcels and is approximately 1.78-acres. The County Assessor's Parcel Numbers for the Site are 4315-018-029, -030, -031, -032, -033, -034, and -048. The legal description of the Site is described as follows:

PARCEL 1 (APNs: 4315-018-029, and -030)

LOTS 29, 30 AND 31 IN BLOCK 13 OF TRACT NO. 7260, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 78 PAGES 64 AND 65 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

PARCEL 2 (APNs: 4315-018-031, -032, -033, and -034)

LOTS 32, 33, 34, 35, 36 AND 37 IN BLOCK 13 OF TRACT NO. 7260, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP

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RECORDED IN BOOK 78 PAGES 64 AND 65 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

PARCEL 3 (APN: 4315-018-048)

LOTS 10, 11, 12 AND 13 IN BLOCK 14 OF TRACT NO. 7260, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 78 PAGES 64 AND 65 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY. EXCEPT THEREFROM THOSE PORTIONS OF SAID LOTS 10, 11 AND 13 INCLUDED WITHIN THE LAND DESCRIBED IN THE DEED OF TRUST RECORDED ON JULY 2, 1951 AS INSTRUMENT NO. 134, IN BOOK 36657 PAGE 180 OFFICIAL RECORDS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A POINT IN THE SOUTHWESTERLY LINE OF LOT 14 IN SAID BLOCK 14 DISTANT SOUTH 61° 39' 50" EAST 29.74 FEET FROM THE MOST WESTERLY CORNER OF SAID LOT 14; THENCE ALONG THE SOUTHWESTERLY LINES OF SAID LOTS 14 AND 13, SOUTH 61° 39' 50" EAST 65.11 FEET; THENCE NORTH 50° 34' 15" EAST 78.01 FEET; THENCE NORTH 39° 25' 45" WEST 74.05 FEET TO THE SOUTHEASTERLY LINE OF THE LAND DESCRIBED AS PARCEL 33-A IN DECREE OF CONDEMNATION ENTERED IN CASE NO. 428317 OF THE SUPERIOR COURT OF THE STATE OF CALIFORNIA IN AND FOR SAID COUNTY OF LOS ANGELES A CERTIFIED COPY OF SAID DECREE BEING RECORDED MAY 17, 1939 IN BOOK 16631 PAGE 117 OF OFFICIAL RECORDS; THENCE ALONG SAID SOUTHEASTERLY LINE AND ITS PROLONGATION SOUTH 50° 34' 15" WEST 93.39 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE EASTERLY AND HAVING A RADIUS OF 10 FEET; THENCE WESTERLY AND SOUTHERLY ALONG THE ARC OF SAID CURVE 19.59 FEET TO THE POINT OF BEGINNING. ALSO EXCEPT THEREFROM THAT PORTION OF SAID LOT 10, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWESTERLY CORNER OF SAID LOT 10; THENCE ALONG THE WESTERLY LINE OF SAID LOT 10, SOUTH 0° 07' 51" WEST 16.69 FEET TO THE NORTHEASTERLY LINE OF THE LAND DESCRIBED IN PARCEL 2 OF THE DEED OF TRUST RECORDED JULY 2, 1951 AS INSTRUMENT NO. 134 IN BOOK 36657 PAGE 180 OF OFFICIAL RECORDS; THENCE ALONG SAID NORTHEASTERLY LINE SOUTH 39° 25' 45" EAST 22.28 FEET, MORE OR LESS, TO THE MOST EASTERLY CORNER OF SAID LAST MENTIONED LAST; THENCE NORTH 61° 00' 00" EAST 20.71 FEET; THENCE SOUTH 1° 27' 30" WEST 24.67 FEET TO THE NORTHERLY LINE OF SAID LOT 10; THENCE SOUTH 88° 32' 30" WEST 31.61 FEET TO THE POINT OF BEGINNING. ALSO EXCEPT THEREFROM THAT PORTION OF SAID LOT 13, LYING NORTHWESTERLY OF A LINE BEARING NORTH 50° 34' 15" EAST FROM A POINT IN THE SOUTHEAST LINE OF SAID LOT 13, DISTANT ALONG SAID SOUTHWEST LINE AND ITS NORTHWESTERLY PROLONGATION SOUTH 61° 39' 50" EAST 94.85 FEET FROM THE MOST WESTERLY CORNER OF SAID LOT 14 IN SAID BLOCK 14.

2.1.3 Site and Vicinity General Characteristics

The Site consists of three (3) irregular-shaped parcels containing approximately 1.78-acres. The Site is developed with 12 residential buildings and multiple residential garages.

Bellwood Avenue bisects the Site. A dry cleaners (Michael's Cleaners, 10344 W. Olympic Blvd.) and smog check/oil change business (Smog Check, 10344 ½ W. Olympic Blvd.) are located on the northern adjoining property. Other properties in the general area are used for commercial and residential purposes.

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2.2 Physical Setting

2.2.1 Topography

The Site is located approximately 230 feet above mean sea level with surface topography sloping towards the west-southwest (United States Geological Survey [USGS] Topographic Map, Beverly Hills, California, photo revised 1999).

2.2.2 Geology

The Site is underlain by unconsolidated and semi-consolidated older alluvium, lake, playa, and terrace deposits (Division of Mines and Geology, Geologic Map of California, 2010).

2.2.3 Hydrogeology

The nearest groundwater well to the Site is located approximately 2¾-mile west of the Site near the intersection of Wilshire Boulevard and South Bundy Drive. According to the Department of Public Works, when State Well number 2535J was measured on April 27, 2009, the depth to groundwater was recorded at 25.55 feet below ground surface (bgs). The surface elevation was recorded at 211.25 feet. The direction of regional groundwater is believed to follow surface topography to the west-southwest.

According to reports prepared for the western adjoining site (10350 W. Olympic Boulevard) obtained from the State Water Resources Control Board's Geotracker database, groundwater monitoring was conducted at that site from as early as 1986 to December 2008. The most recent groundwater monitoring report was prepared by Stantec Consulting on January 13, 2009. That report indicated that depth to groundwater at that site ranged from 56.11 to 97.99 feet bgs, and that groundwater gradient is approximately 0.12 feet per foot to the southwest.

Groundwater was not encountered in the any of the six (6) borings completed to depths of 30 feet bgs.

2.3 Site History and Land Use

From as early as 1894 to 1938, the Site was undeveloped. In 1940, building permits for 11 residential buildings and associated residential garages located on the southern Site parcels (south of Bellwood Avenue) were issued. These structures were all visible on the 1948 aerial photograph. By 1952, the 12th residential building, located on the northern Site parcel (north of Bellwood Avenue) had been constructed. The Site has remained in the same configuration since 1952.

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2.4 Adjacent Property Land Use

North: West to east:

- Michael's Cleaners (10344 W. Olympic Blvd.)
- Smog Check (10344 1/2 W. Olympic Blvd.)
- Century Park Hotel (10330 W. Olympic Blvd.)
- Courtyard by Marriott (10320 W. Olympic Blvd.)

South: Single-family residential neighborhood

East: Single-family residential neighborhood

West: Si Beaux Salon (10330 Bellwood Avenue), and Goodwill (10350 W. Olympic Blvd.)

2.5 Summary of Previous Assessment Reports

The following information/documentation was provided by the User and is summarized below.

A Transaction Screen Process (TSP) report, dated September 27, 2012, was prepared by Converse for the Site. Based on information obtained during the TSP, there was a low potential for environmental concern to the Site from known property uses. The Site was not identified in the EDR-Radius Map Report on databases suggesting subsurface contamination and no evidence of a spill of hazardous materials storage/wastes was noted during the Site reconnaissance. Adjacent properties were of concern based on use for dry cleaning and a gasoline service station. Records indicated that a prior Phase II ESA was conducted that addressed dry cleaner solvent (PCE) impact to soil, but did not address soil vapor concerns from the drycleaners nor the prior gas station use. It was recommended in the TSP report that further soil vapor assessment was warranted.

Converse completed a Phase II ESA for the Site, and the findings of that assessment were presented in a Phase II ESA report dated November 7, 2012. The scope of that assessment included six (6) borings completed to 15 feet beneath ground surface (bgs), and collection of soil vapor samples from depths of 5 and 15 feet bgs. All soil vapor samples were analyzed for volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) in the gasoline range. All reported TPH and VOC concentrations were below their respective screening levels for residential and commercial/industrial land uses, with the exception of PCE, which was reported in 12 samples with a maximum concentration of 13,000 micrograms per cubic meter (ug/m^3). Concentrations of PCE in three (3) samples collected from borings B1 and B2 (located on the northern most parcel of the Site) exceeded the screening level for residential land use, but all concentrations were less than the screening level for a

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commercial/industrial land use. It was recommended that a HHSE be completed to evaluate the risk associated with the detected PCE concentrations.

A HHSE, dated November 21, 2012, was prepared by Converse to evaluate the reported concentrations of PCE. The total estimated cancer risk resulting from the maximum PCE concentration under a residential land use scenario was determined to be 1.40×10^{-5}, which is within the EPA discretionary risk range of 1.0×10^{-4} to 1.0×10^{-6}. It is noted that the maximum PCE concentration evaluated in the HHSE was approximately 20 times more than the maximum concentration of PCE previously detected at the Site of 500 ug/m^3 at location B5.

Converse completed a Phase II ESA for a portion of the Site, and the findings of that assessment were presented in a Phase II ESA report dated January 24, 2017. The scope of the assessment included four (4) borings completed to 15 feet bgs. Soil vapor samples were collected from temporary probes set at 5 and 15 feet bgs at each boring location. A total of 36 VOCs were detected in one or more of the vapor samples collected from the Site. A majority of the compounds detected are commonly associated with gasoline and solvents, which is consistent with the suspected impacts from the RECs identified in the Converse TSP report. Concentrations of benzene, 1-3 butadiene, and PCE were reported in 1 or more samples at concentration that exceed their calculated screening level for residential land use, but are less than the screening levels for commercial land use. The maximum concentrations of all other compounds were less than their screening level for residential land use. Converse noted that benzene is commonly associated with gasoline, and the source could be from the historic gas station. 1-3 butadiene is a product of combustion, and the source for this compound is unknown. PCE is a solvent, and the source was likely the historic cry cleaning operation or automotive repair facility. The maximum PCE concentrations reported during that assessment were generally consistent with the concentrations previously reported in sample B5-15. Converse concluded the following:

- Although a HHSE was not completed using the results of this assessment, based on all reported VOC concentrations being less than the screening levels for commercial land use, it is believed that the risk to Site occupants would be consistent with the findings of the prior HHSE which found the risk to Site occupants under a residential land use scenario to be within the EPA risk management range.
- Based on the results of this assessment, the impacts to the Site from historic uses of adjacent properties does not appear to have significantly changed since the prior assessment completed in 2012. The threat posed to the health of Site occupants from the chemical concentrations reported are believed to be within the EPAs risk management range.

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3.0 Work Performed and Rationale

3.1 Scope of Assessment

A conceptual model was developed based on data obtained from the prior assessment reports, and proposed redevelopment plans that could potentially include excavation and removal of the upper approximately 25 feet of soil across the Site.

3.1.1 Target Analytes

Data obtained during the prior assessments indicated TPH and VOCs could be present in soil and soil vapor beneath the Site. The Site is located within a City-designated Methane Zone, so methane and associated gases are also a potential concern.

3.1.2 Target Analytes First Entered the Environment

The target areas of concern at the Site include the adjoining drycleaners and former gas station use. These data indicate that target analytes would have first entered the environment by surface spills, equipment leaks or releases to the subsurface soil.

3.1.3 Environmental Media and Locations Most Likely to Have the Highest Concentrations of Target Analytes

The environmental media most likely to have the highest concentrations of the target analytes are soil and soil vapor.

This *Phase II ESA* consisted of the following primary elements:

- A total of six (6) soil borings were completed at the Site to depths of 30-feet bgs. The borings were generally co-located to the borings completed by Converse during the Phase II ESA completed in 2012.
- Borings were completed using direct-push drilling methods to maximum depths of 30 feet bgs. Soil samples were collected from each of the borings from depths of 5, 10, 15, 20, 25, and 30 feet bgs. Soil-vapor samples were collected from temporary soil vapor probes installed in each of the borings at depths of 15 and 30 feet bgs.
- Analysis of soil and soil vapor samples as follows:
  - Two (2) soil samples collected from the top 20 feet (i.e. 5, 10, 15, or 20 feet bgs) of each boring were analyzed for total petroleum hydrocarbons (TPH), carbon chain analysis in accordance with Environmental Protection Agency (EPA) method 8015, and volatile organic compounds

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(VOCs), in accordance with EPA Method 8260B. The remaining soil samples from each boring were archived pending results from the soils analyses.

- All soil vapor samples collected were analyzed for VOCs in accordance with EPA Method TO-15.
- Each of the 12 soil-vapor probes were screened for methane using a Landtec GEM 5000 analyzer. Two (2) sets of readings were taken 24 hours a part in general accordance with the requirements of the Los Angeles Department of Building and Safety (LADBS).

3.2 Soil Sample Collection

On April 30, 2018, a total of six (6) borings were completed utilizing direct-push (Geoprobe™) drilling methods. Four borings (B1A, B2A, B3A, and B4A) were completed in the parking lot on the west side of the residential building located at 10355 Bellwood Avenue; one (1) boring (B5A) was completed in the front lawn on the east side of the residential building located at 10384 Bellwood Avenue; and the sixth boring (B6A) was completed in the parking lot on the north side of the residential building located at 10340 Bellwood Avenue. The approximate sample locations are indicated on Figure 2, Sample Locations.

The borings were completed to depths of 30 feet bgs. Soil samples were collected in acetate sleeves at depths of 5, 10, 15, 20, 25, and 30 feet bgs from each of the borings. Encore sample containers were used to collect subsamples of soil from each sleeve in accordance with EPA Method 5035 for analysis for VOCs. A portion of each sample was also screened in the field for VOCs using a photo-ionization detector (PID).

3.3 Soil Vapor Sample Collection

Temporary soil vapor probes were installed in each of the borings at depths of 15 and 30 feet bgs. Soil vapor probes were constructed using a six-inch porous soil vapor implant connected to ¼-inch Nylaflow tubing. The implants were surrounded by an approximate 1-foot sand pack that extended slightly above and below the implants. The remainder of each borehole was filled with hydrated bentonite granules.

Soil vapor samples were collected on May 1, 2018 after having equilibrated for over 2 hours. The probes were purged and sampled in general accordance with the Joint Department of Toxic Substances Control (DTSC)/Regional Water Quality Control Board (RWQCB) Advisory for Active Soil Gas Investigations, dated July, 2015. The rate at which tubing was purged and samples were collected did not exceed 200 milliliters per minute. Approximately three (3) well-volumes of air was purged from each line using a syringe, and then samples were collected in 1-liter summa canisters.

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The soil vapor probes were also screened in the field for methane in general accordance with LADBS requirements on May 1 and 2, 2018. It is noted that this testing was only completed as a preliminary screening since detailed development plans would be required to complete the testing in accordance with the LADBS requirements. A GEM 5000 landfill gas analyzer was used to initially evaluate the probes for the potential buildup of pressure, and then to extract and analyze samples for methane and other fixed gasses.

3.4 Field Quality Assurance/Quality Control

The following are some of the quality assurance and quality control measures that were taken to evaluate the quality of the data generated:

- Standard EPA sample handling protocol including chain-of-custody control were followed.
- New dedicated sampling equipment (Teflon tubing) was used for the collection of samples.
- Reusable sampling equipment (cutting shoe) was decontaminated between uses.
- A shut-in test was conducted prior to the collection of soil vapor samples to evaluate the integrity of the fitting.

3.5 Chemical Analytical Methods

All soil samples were submitted under chain of custody documentation to American Environmental Testing Laboratories (AETL) in Burbank, California. Two (2) soil samples from the top 20 feet of each boring were analyzed for:

- VOCs in accordance with EPA Method 8260B.
- TPH carbon chain analysis in accordance with EPA Method 8015

The remaining soil samples from each boring were archived pending the results of soils analyses.

The soil vapor samples were submitted under chain of custody documentation to ESC Lab Sciences in Mount Juliet, Tennessee for analysis for VOCs in accordance with EPA Method TO-15.

Both laboratories are certified by the State of California Department Health Services for the analyses conducted.

Soil vapor probes were also screened for methane and fixed gasses using field equipment.

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4.0 Presentation and Evaluation of Results

4.1 Subsurface Conditions

During drilling activities, subsurface soils were observed to be primarily sandy clay in the upper 15 feet, and silty sand between 15 and 30 feet bgs. Groundwater was not encountered in any of the borings completed to 30-feet bgs during this assessment.

4.2 Analytical Results

A summary of the results is provided below. Copies of the laboratory analytical reports are included in Appendix A.

4.2.1 Soil Samples

PCE was detected in only one (1) sample, B2A-5, located directly adjacent to the dry cleaners at a concentration of 45.0 micrograms per kilogram (ug/kg) which is less than the screening level for residential land use of 590 ug/kg. No other VOCs were detected in the soil samples collected.

TPH in the gasoline and diesel ranges were not detected in any of the soil samples. TPH in the heavy oil range was detected in samples B2A-5, B2A-10, and B4A-5 at concentrations of 11.0, 1.60, and 121 milligrams per kilogram (mg/kg), respectively. All three (3) reported detections were below the residential screening level for TPH in the heavy oil range of 11,000 mg/kg.

Tabulated data for VOCs and TPH in soil samples is presented in Table 1. Historic data from prior assessments conducted at the Site are also presented on this table. Based on the limited number of detections, no trends are apparent between the current and historic data sets.

4.2.2 Soil Vapor Samples

The following 28 VOCs and low fraction TPH were reported in one or more of the 12 soil vapor samples collected:

benzene	methyl butyl ketone
benzyl chloride	2-butanone (MEK)
chloroform	methyl tert butyl ether (MTBE)
chloromethane	napthalene
2-chlorotoluene	styrene

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1,1-dichloroethene	tetrachloroethylene (PCE)
1,4-dioxane	tetrahydrofuran
ethanol	toluene
ethylbenzene	trichloroethylene (TCE)
trichlorofluoromethane	1,2,4-trimethylbenzene
dichlorodifluoromethane	1,3,5-trimethylbenzene
1,2-dichlorotetrafluoroethane	m,p-xylene
n-hexane	o-xylene
isopropylbenzene	TPH-Low Fraction
methylene chloride	

Tabulated data for VOCs in soil vapor samples is presented in Table 2. Historic data from prior assessments conducted at the Site are also presented on this table. No consistent trends in the concentrations between the current and historic data sets are apparent.

An initial screening level for the compounds reported in the soil vapor was calculated in accordance with the DTSC Vapor Intrusion Guidance (October 2011) (VIG) by applying an attenuation factor to the maximum soil vapor concentration of each compound reported to arrive at an estimated indoor concentration. An attenuation factor of 0.001 (per Table 2 of the VIG) for future residential construction was used. The estimated indoor air concentration was then compared to the appropriate indoor air screening level per DTSC Human Health Risk Assessment (HHRA) Notes #3 and #5, and/or EPA RSLs. It is noted that no screening levels are published for 2-chlorotoluene, ethanol, trichlorofluoromethane, 1,2-dichlorotetrafluoroethaner, isopropylbenzene, methyl butyl ketone, naphthalene, or tetrahydrofuran.

With the exceptions of PCE and TCE, all reported VOC concentrations were below their respective screening levels for residential indoor air.

- TCE was reported at a maximum concentration of 2,200 micrograms per cubic meter (ug/m^3) in sample B2A-30. This concentration is calculated to result in an estimated indoor air concentration of 2.2 ug/m^3 which is in excess of its screening level for residential indoor air of 0.48 ug/m^3, but less than the commercial screening level of 3 ug/m^3. All other reported TCE concentrations result in estimated indoor air concentrations that are less than the residential screening level.

- PCE was reported in nine (9) samples (B1A-30, B2A-15, B2A-30, B3A-15, B3A-30, B4A-15, B4A-30, B5A-30, and B6A-30) at concentrations that result in estimated indoor air concentrations in excess of the screening level for residential indoor air of 0.46 ug/m^3.

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The concentrations of five (5) of these samples (B2A-15, B2A-30, B3A-15, B3A-30, and B4A-30) also exceed the screening level for commercial indoor air of 2 ug/m^3. The maximum estimated indoor air concentration is 28.0 ug/m^3 in sample B2A-30.

Preliminary sketches provided for the proposed redevelopment of the Site, Bellwood Avenue is proposed to be relocated and shifted northward to be adjacent to the northern Site boundary. Based on this design, sample locations B1A, B2A and B3A, where the highest PCE and TCE concentrations were detected, will be located under the relocated roadway and will have no structures built directly atop them. Sample locations B4A, B5A and B6A were collected from locations that will be within the footprint of the proposed structure. The proposed structure includes two (2) subterranean levels (the lowest that will be used for parking and the other that will be used for parking and a common area), and three to six levels above. It is assumed that the subterranean level will be conventional slab on grade with spread footings. This would place the bottom of the slab at an approximate depth of 30-feet below grade.

4.2.3 Methane Screening

The maximum pressure detected in any of the soil vapor probes was 0.02 inches of water.

Methane was detected in eight (8) of the 12 soil vapor probes at a concentration of 0.1 % (or 1,000 parts per million) during the initial round of monitoring conducted on May 1, 2018. It is noted that this concentration is equal to the minimum detection limit of the instrument, and that the meter was recalibrated prior to conducting the second round of readings on May 2, 2018. Methane was not detected in any of the soil vapor probes during the second screening.

Additional gases that were monitored included carbon dioxide, oxygen, hydrogen sulfide, and carbon monoxide.

Tabulated data for the field screening readings is presented in Table 3. Based on the results of this screening the Site would only need to incorporate the minimum level of methane mitigation measures required by the LADBS ordinance.

4.3 Data Quality Assurance/Quality Control

4.3.1 Hold Times

All soil and soil vapor samples were transported to the laboratory under chain-of-custody documentation and were analyzed within appropriate hold times.

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4.3.2 Laboratory Quality Assurance

The laboratories provided data to estimate precision, accuracy, and bias. The laboratory reports indicated that the method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives for soil and soil vapor.

4.3.3 Practical Quantitation Limits

Practical quantitation limits (PQL) and method detection limits (MDL) for soil and soil vapor samples were provided by the laboratories.

The PQLs for VOCs in soil ranged from 5 to 50 micrograms per kilogram (µg/kg). A dilution factor (DF) of 1 was applied to all the samples.

The PQL for TPH in the gasoline range was 1 mg/kg. A PQL of 5.0 mg/kg was reported for diesel and oil range TPH.

PQLs for VOCs in soil vapor ranged from 0.826 to 413 $\mu g/m^3$. DFs between 2 and 400 were applied.

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5.0 Interpretation and Conclusions

5.1 RECs and Potential Release Area(s)

Based on the results of the assessments/evaluations, Converse identified the following recognized environmental conditions (RECs) in connection with the Site:

- The identified presence of PCE in soil-vapor at levels in excess of screening levels for residential land use, as reported in previous Phase II ESAs completed at the Site.
- The identification of a former gas and oil service station and auto repair business on the northern adjoining property (10344 W. Olympic Boulevard).
- The identification of an existing dry cleaning business (Michael's Cleaners) and smog check and oil change business on the northern adjoining property (10344-10344 1/2 W. Olympic Boulevard).
- The Site is located within a City-designated methane zone.
- A vapor encroachment condition exists for the Site.

5.2 Conceptual Model Validation/Adequacy of Investigations

It is our opinion that the field and analytical data validated the conceptual model. However, while the assessment evaluated the identified objectives of the *Phase II ESA,* it did not completely identify the extent of contamination.

5.3 Absence, Presence, Degree, Extent of Target Analytes

Based upon the results of the *Phase II ESA*, there appear to be impacts to the Site from potential off-site releases.

Soil: PCE was detected in one (1) sample (B2A-5) at a concentration of 45 ug/kg, which is less than the screening level for residential land use of 590 ug/kg. No other VOCs were detected in the soil samples collected. TPH in the heavy oil range was detected in three (3) samples (B2A-5, B2A-10, and B4A-5) at a maximum concentration of 121 mg/kg, which is below the residential screening level of 11,000 mg/kg. TPH in the gasoline and diesel ranges were not detected in any of the soil samples.

The likely source of the PCE concentration in soil is the adjacent dry cleaning facility. The reported concentrations of oil range TPH could be related to the automotive service facilities on the north adjacent property.

Soil Vapor: A total of 28 VOCs and low fraction TPH were reported in the soil vapor samples, but PCE and TCE were the only compounds with reported concentrations that exceed their respective residential screening levels. The

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maximum estimated indoor air concentration of TCE of 2.2 ug/m^3 from sample B2A-30 exceeds the residential screening level 0.48 ug/m^3, but is less than the commercial screening level of 3 ug/m^3. The maximum estimated indoor air concentration of PCE is 28.0 ug/m^3 in sample B2A-30. The estimated indoor air concentration from nine (9) samples exceed the residential screening level of 0.46 ug/m^3, and five (5) also exceed the commercial screening level of 2 ug/m^3.

Methane: During the initial screening methane was detected in eight (8) of the 12 soil vapor probes at a concentration of 1,000 ppmv (equal to the instrument detection limit). Methane was not detected in any of the soil vapor probes during the second screening event. The maximum recorded pressure in any probe was 0.02 inches of water.

5.4 Other Concerns

6.4.1 Significant Assumptions

No significant assumptions were made during this assessment.

6.4.2 Limitations and Exceptions

No limitations or exceptions were encountered during this investigation.

6.4.3 Special Terms and Conditions

No special terms or conditions need to be noted in this *Phase II ESA* report.

5.5 Conclusions

Converse has performed a *Phase II ESA* at 10330-10384 ½ Bellwood Avenue in the City of Los Angeles, Los Angeles County, California in conformance with the scope and limitations of ASTM, E1903-11 and the following objectives:

- Evaluate the RECs in connection with the adjoining properties that were identified during the Phase I ESA and past environmental assessments;
- Conduct an initial screening of the Site for methane; and
- Identify if potential target analytes are present at concentrations greater than threshold criteria.

Based on the results of this assessment Converse presents the following findings:

- PCE was detected in one soil samples at a concentration less than the screening level for residential land use. No other VOCs were detected in the soil samples collected.

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- TPH in the heavy oil range was detected in three (3) soil samples at concentrations less than the screening levels for residential land use. TPH in the gasoline and diesel ranges were not detected in any of the soil samples.
- A total of 28 VOCs and low fraction TPH were reported in the soil vapor samples, but PCE and TCE were the only compounds with reported concentrations that exceed their respective residential screening levels. The likely source of the PCE and TCE concentrations in soil vapor is the adjacent dry cleaning facility.
  - The maximum estimated indoor air concentration of TCE of 2.2 ug/m^3 from sample B2A-30 exceeds the residential screening level 0.48 ug/m^3, but is less than the commercial screening level of 3 ug/m^3.
  - The maximum estimated indoor air concentration of PCE is 28.0 ug/m^3 in sample B2A-30. The estimated indoor air concentration from nine (9) samples exceed the residential screening level of 0.46 ug/m^3, and five (5) samples (B2A-15, B2A-30, B3A-15, B3A-30, and B4A-30) also exceed the commercial screening level of 2 ug/m^3.
- Site history and background information indicated the off-site uses of concern adjacent to the Site included dry cleaning operations, which involve the handling and storage of solvents, specifically PCE, and an automotive service station. It is noted that TCE is a breakdown byproduct of PCE, and is also a chemical commonly used as a solvent in dry cleaning operations. No onsite uses of concern were identified.
- Methane was not detected in any of the soil vapor probes during the second screening event, and the maximum recorded pressure in any probe was 0.02 inches of water.

Based on the findings of this assessment Converse concludes the following:

- The soils at the Site do not appear to be significantly impacted and are believed to be acceptable for reuse onsite. Based on the reported concentrations of VOCs and TPH in the soil samples analyzed it is not anticipated that there would be any special handling or disposal requirements associated with soils that might be exported from the Site during redevelopment.
- The soil vapor beneath the Site is impacted with PCE and TCE in excess of residential screening levels. The Site is within a City designated methane zone, thus all buildings and paved areas will be required to comply with the requirements of the City's Methane Mitigation Standards pursuant to the City code. The proper installation of the methane mitigation system consistent with LADBS requirements, including a venting system and gas barrier installed for the purpose of impeding methane and VOC gas migration into the buildings, would reduce the potential for vapor intrusion of VOCs to acceptable health-risk based levels.
- Based on the results of the initial methane screening, the Site will likely fall under the LADBS Level II for mitigation design requirements.

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6.0 Recommendations

Based on the findings of this assessment Converse has determined that no further action is warranted to assess the objectives of this Phase II ESA.

Once redevelopment plans for the Site are confirmed, further testing for methane will need to be conducted in accordance with LADBS Site Testing Standards.

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7.0 Reliance

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8.0 References and Sources of Information

California State Department of Toxic Substances Control (DTSC) and California Regional Water Quality Control Board (RWQCB), Los Angeles Region, Advisory-Active Soil Gas Investigations, July 2015.

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Figures

Figures

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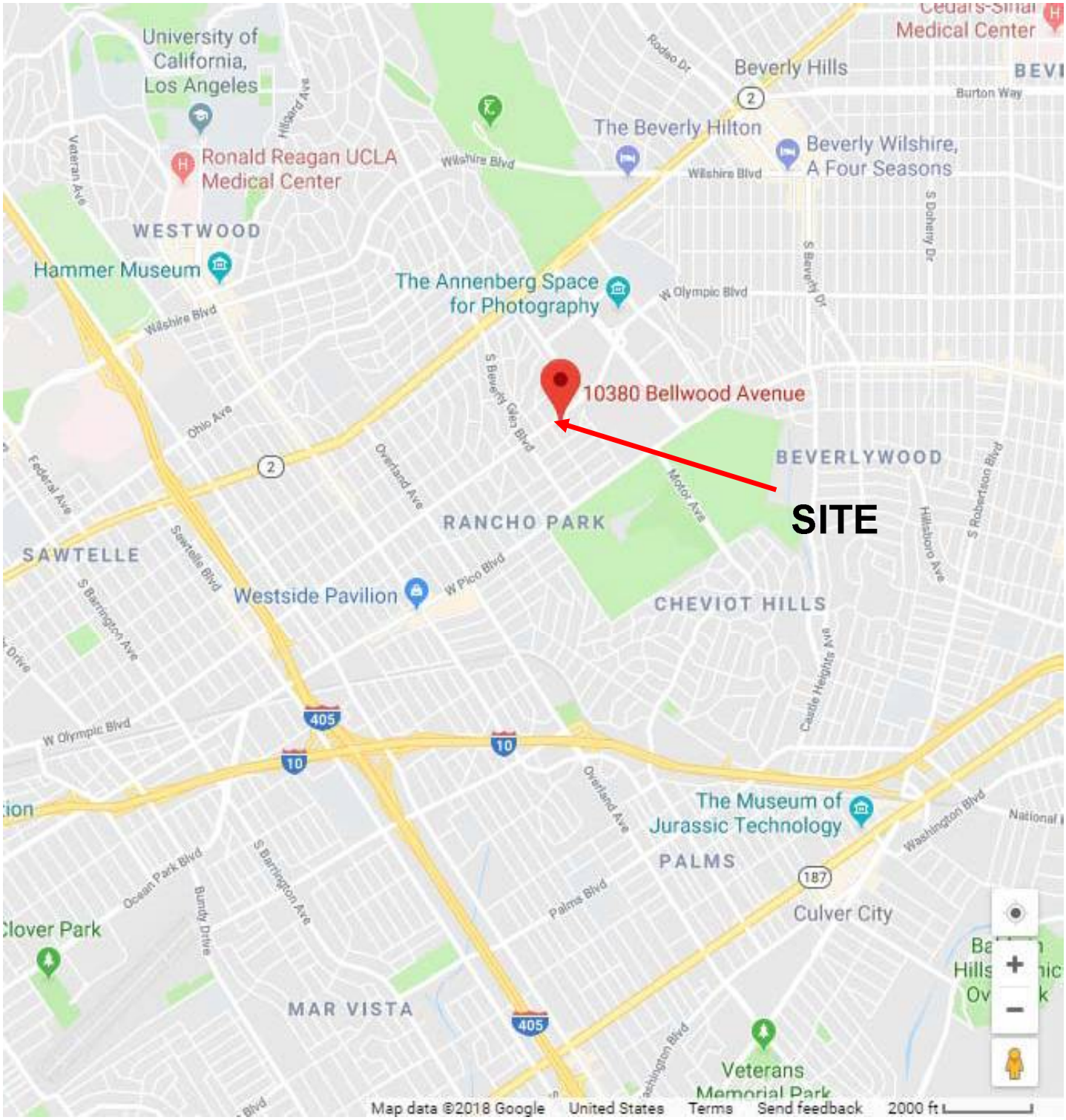

SITE LOCATION MAP

SBLP Century City, LLC
10330-10384 ½ Bellwood Avenue
Los Angeles, California

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18-41-139-02

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FIGURE 1

SAMPLE LOCATIONS

SBLP Century City, LLC
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FIGURE **2**

Tables

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Table 1
Summary of Soil Matrix Sample Analytical Results
10330-10384 1/2 Bellwood Avenue
Los Angeles, California

Boring Location	Sample Depth (ft bgs)	Date	Volatile Organic Compounds (VOCs) (ug/kg)		Total Petroleum Hydrocarbons (TPH) (mg/kg)		
			Tetrachloroethylene (PCE)	All Other VOCs	Gasoline	Diesel	Oil
B1/1A	5	10/12/2005	ND	ND	-	-	-
		4/30/2018	ND	ND	ND	ND	ND
	15	10/12/2005	ND	ND	-	-	-
	20	4/30/2018	ND	ND	ND	ND	ND
	25	10/12/2005	ND	ND	-	-	-
B2A	1	10/12/2005	**18.0**	ND	-	-	-
	5	10/12/2005	ND	ND	-	-	-
		4/30/2018	**45.0**	ND	ND	ND	**11.0**
	10	4/30/2018	ND	ND	ND	ND	**1.60**
	25	10/12/2005	ND	ND	-	-	-
B3A	5	4/30/2018	ND	ND	ND	ND	ND
	15	4/30/2018	ND	ND	ND	ND	ND
B4A	5	4/30/2018	ND	ND	ND	ND	**121**
	15	4/30/2018	ND	ND	ND	ND	ND
B5A	5	4/30/2018	ND	ND	ND	ND	ND
	10	4/30/2018	ND	ND	ND	ND	ND
B6A	5	4/30/2018	ND	ND	ND	ND	ND
	20	4/30/2018	ND	ND	ND	ND	ND
Screening Levels		Residential	590	--	740	230	11,000
		Commercial	2,700	--	3,900	1,100	140,000

ug/kg = micrograms per kilogram
mg/kg = miligrams per kilogram
ND = Not Detected
NA = Not Applicable
ft bgs = feet below ground surface

Table 2
Summary of Soil Vapor Sample Analytical Results
10330-10384 1/2 Bellwood Avenue
Los Angeles, California

Probe Location	Sample Depth (ft bgs)	Sample Date	Volatile Organic Compounds (VOCs) ($\mu g/m^3$)																													
			Benzene	Benzyl Chloride	Chloroform	Chloromethane	2-Chlorotoluene	1,1-Dichloroethene	1,4-Dioxane	Ethanol	Ethylbenzene	Trichlorofluoromethane	Dichlorodifluoro-methane	1,2-Dichloro-tetrafluoroethane	n-Hexane	Isopropylbenzene (Cumene)	Methylene Chloride	Methyl Butyl Ketone (2-Hexanone)	2-Butanone (MEK)	MTBE	Napthalene	Styrene	Tetrachloroethylene (PCE)	Tetrahydrofuran	Toluene	Trichloroethylene (TCE)	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	TPH-Low Fraction	All Other VOCs
B1/1A	5	10/31/2012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,500	ND	ND	ND	ND	ND	ND	ND	ND	ND
	15	10/31/2012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	13,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
		5/1/2018	19.4	ND	6.58	ND	ND	1.94	ND	26.3	6.46	2.55	299	ND	76.1	ND	2.43	25.2	82.4	ND	ND	1.78	448	121	47.4	92.6	3.59	ND	21.5	6.36	2,940	ND
	30	5/1/2018	25.9	ND	28.9	1.58	ND	ND	ND	29.9	8.77	3.62	977	ND	59.3	ND	8.73	ND	52.1	ND	ND	2.57	1,990	36.0	93.4	448	8.84	4.47	29.7	9.05	4,490	ND
B2/2A	5	10/31/2012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,500	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,100	ND	ND	ND	ND	ND	ND	ND	ND	ND
			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,600	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,400	ND	110	ND	ND	ND	ND	ND	ND	ND
			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,700	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,500	ND	ND	ND	ND	ND	ND	ND	ND	ND
	15	10/31/2012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6,500	ND	ND	ND	ND	ND	ND	ND	ND	ND	5,200	ND	ND	ND	ND	ND	ND	ND	ND	ND
		5/1/2018	17.9	ND	15.0	5.52	ND	3.30	ND	16.9	5.23	ND	161	ND	286	ND	ND	24.5	37.2	ND	ND	ND	6,790	121	47.7	247	2.16	ND	17.8	4.96	5,380	ND
	30	5/1/2018	23.6	ND	35.0	ND	ND	ND	ND	14.8	21.1	5.32	2,090	4.53	52.1	ND	1.51	ND	34.1	ND	ND	5.27	28,000	33.7	90.5	2,200	22.1	9.52	82.7	24.9	7,010	ND
B3/3A	5	10/31/2012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	440	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	ND	ND	ND	ND	ND	ND	ND	ND	ND
	15	10/31/2012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,300	ND	ND	ND	ND	ND	ND	ND	ND	ND	400	ND	110	ND	ND	ND	ND	ND	ND	ND
		5/1/2018	4.81	ND	ND	ND	ND	ND	ND	19.5	5.29	3.87	488	ND	15.9	ND	1.67	ND	33.4	ND	ND	ND	5,800	93.4	32.5	218	3.57	ND	21.5	6.32	3,570	ND
	30	5/1/2018	4.40	2.39	2.78	ND	ND	ND	ND	16.3	4.84	6.54	2,420	4.70	3.63	ND	ND	ND	18.8	ND	ND	ND	11,300	17.7	10.9	299	42.5	13.9	53.0	21.4	3,670	ND
B4/4A	5	10/31/2012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,700	ND	ND	ND	ND	ND	ND	ND	ND	ND
	15	10/31/2012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8,600	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,200	ND	ND	ND	ND	ND	ND	ND	ND	ND
			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,900	ND	ND	ND	ND	ND	ND	ND	ND	ND
		5/1/2018	17.3	2.14	2.83	1.21	3.01	ND	ND	18.2	13.9	2.64	362	ND	36.4	2.47	2.22	ND	31.7	ND	ND	3.83	1,570	25.9	67.7	19.6	48.2	24.8	59.0	18.7	5,020	ND
	30	5/1/2018	11.2	ND	15.4	ND	ND	ND	ND	5.07	7.92	4.55	1,690	3.30	24.0	ND	ND	ND	31.2	ND	ND	2.53	6,590	63.2	35.8	46.3	13.9	6.73	28.0	8.77	4,080	ND
B5/5A	5	10/31/2012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	15	10/31/2012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	500	ND	ND	ND	ND	ND	ND	ND	ND	ND
		5/1/2018	13.9	ND	2.29	1.06	ND	ND	ND	115	10.2	ND	75.0	ND	14.4	ND	15.9	ND	37.6	ND	ND	2.11	324	25.5	70.2	4.41	9.64	3.70	47.0	15.0	2,280	ND
	30	5/1/2018	5.59	ND	ND	1.64	ND	ND	ND	134	6.24	2.52	282	ND	7.36	ND	15.2	ND	43.7	ND	ND	ND	762	26.7	59.8	4.32	4.73	ND	32.6	11.2	2,610	ND

Table 2
Summary of Soil Vapor Sample Analytical Results
10330-10384 1/2 Bellwood Avenue
Los Angeles, California

Probe Location	Sample Depth (ft bgs)	Sample Date	Volatile Organic Compounds (VOCs) ($\mu g/m^3$)																												
			Benzene	Benzyl Chloride	Chloroform	Chloromethane	2-Chlorotoluene	1,1-Dichloroethene	1,4-Dioxane	Ethanol	Ethylbenzene	Trichlorofluoromethane	Dichlorodifluoro-methane	1,2-Dichloro-tetrafluoroethane	n-Hexane	Isopropylbenzene (Cumene)	Methylene Chloride	Methyl Butyl Ketone (2-Hexanone)	2-Butanone (MEK)	MTBE	Napthalene	Styrene	Tetrachloroethylene (PCE)	Tetrahydrofuran	Toluene	Trichloroethylene (TCE)	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	TPH-Low Fraction	All Other VOCs
B6/6A	5	10/31/2012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	15	10/31/2012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		5/1/2018	2.67	2.12	3.11	ND	ND	ND	ND	31.4	5.06	ND	16.6	ND	2.47	ND	4.07	16.8	53.1	1.89	45.5	ND	196	22.4	7.5	2.25	9.60	2.86	9.28	2.95	1,660	ND
	30	5/1/2018	3.38	ND	9.25	1.13	ND	ND	1.84	14.0	3.05	ND	18.6	ND	8.88	ND	6.45	ND	33.9	ND	ND	ND	600	65.8	46.0	8.34	2.75	ND	11.8	3.48	1,790	ND
SV1	5	1/16/2017	26.0	ND	ND	2.16	ND	2.52	ND	27.6	13.9	ND	17.6	ND	84.2	ND	2.75	ND	18.1	ND	ND	3.5	27.1	ND	94.7	2.4	14.1	4.23	53.2	16.8		ND
	15	1/16/2017	10.2	ND	ND	ND	ND	ND	ND	46.7	7.12	2.75	333	ND	12.9	ND	ND	ND	21.7	ND	ND	3.32	485	6.8	37.2	ND	8.29	1.97	26.4	8.45	-	ND
SV2	5	1/16/2017	27.6	ND	ND	2.09	ND	1.96	ND	21.2	42.1	2.39	83.9	ND	66.0	ND	3.22	ND	18.7	ND	ND	ND	11.8	ND	129	ND	19.3	6.00	183	63.3	-	ND
	15	1/16/2017	9.66	ND	ND	ND	ND	ND	ND	30.3	27.2	ND	184	ND	11.7	ND	ND	ND	19.0	ND	ND	ND	176	6.12	43.2	ND	8.36	2.10	123	52.9	-	ND
SV3	5	1/16/2017	6.96	ND	ND	ND	ND	ND	2.91	25.1	11.6	4.09	47.0	ND	10.1	ND	ND	ND	16.4	ND	ND	3.81	98.8	5.06	24.7	ND	8.4	2.17	48.6	18.6	-	ND
	15	1/16/2017	ND	ND	ND	1.21	ND	ND	ND	7.8	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12.6	ND	ND	ND	ND	ND	7.47	3.12	-	ND
SV4	5	1/16/2017	88.1	ND	ND	1.20	ND	ND	ND	22.6	114	23.3	7.95	ND	201	7.99	3.38	ND	16.9	ND	ND	ND	135	ND	641	6.94	140	48.1	535	113	-	ND
	15	1/16/2017	4.62	ND	4.71	ND	ND	ND	ND	19.9	3.54	ND	89.5	ND	5.0	ND	ND	ND	20.4	ND	ND	4.67	395	3.46	14.6	8.12	6.59	ND	12.1	4.24	-	ND
Maximum Concentration in Soil Vapor (ug/m^3)			88.1	2.39	35	5.52	3.01	3.3	2.91	134	114	23.3	16,000	4.7	286	7.99	15.9	25.2	82.4	1.89	45.5	5.27	28,000	121	641	2,200	140	48.1	535	113	7,010	0
Estimated Indoor Air Concentration (ug/m^3) (based on AF of 0.001)			0.088	0.002	0.035	0.006	0.003	0.003	0.003	0.134	0.114	0.023	16	0.005	0.286	0.008	0.016	0.025	0.0824	0.002	0.046	0.005	28.0	0.121	0.641	2.20	0.14	0.048	0.535	0.113	7.01	
Screening Level - indoor air (ug/m^3)		Residential	0.097	0.057	0.12	94	--	210	0.56	--	1.1	--	100	--	730	420	1	31	5,200	11	0.083	1,000	0.46	--	310	0.48	63	63	100	100	590	
		Commercial	0.42	0.25	0.53	390	--	880	2.5	--	4.9	--	440	--	3,100	1,800	12	130	22,000	47	0.36	4,400	2	--	1,300	3	260	260	440	440	2,500	
Indoor Air Concentration > Residential Screening Level?			NO	NO	NO	NO	NA	NO	NO	NA	NO	NO	NO	NA	NO	NA	NO	NO	NO	NO	NO	NO	YES	NA	NO	YES	NO	NO	NO	NO	NO	
Indoor Air Concentration > Commercial Screening Level?			NO	NO	NO	NO	NA	NO	NO	NA	NO	NA	NO	NA	NO	NA	NO	NO	NO	NO	NO	NO	YES	NA	NO	NO	NO	NO	NO	NO	NO	

nd = Not detected at or above MDL
na = not available
MDL = Method Detection Limit
ft bgs = Feet below ground surface
ug/m^3= micrograms per meter cubed

Screening levels for indoor air based on DTSC Human Health Risk Assessment (HHRA) Note 3, Table 3, San Francisco Bay Regional Water Quality Control Board ESLs, or RSLs.
Gray highlighting indicates use of RSL values.
Green highlighting indicates use of ESLs.
Yellow highlighting indicates concentration in excess or residential screening level
Orange highlighting indicates concentration in excess or commercial screening level

Table 3
Summary of Methane Screening Results
10330-10384 1/2 Bellwood Avenue
Los Angeles, California

Boring ID	Depth (feet)	Date	Pressure (In-H_2O)	Methane (ppmv)	Carbon Dioxide (%)	Oxygen (%)	Hydrogen Sulfide (ppmv)	Carbon Monoxide (ppmv)	Balance (%)
B1A	15	5/1/2018	--	**1,000**	**0.3**	**18.3**	0	0	**81.3**
		5/2/2018	0.00	< 1,000	**0.4**	**19.1**	0	**4**	**80.4**
	30	5/1/2018	--	**1,000**	**3.6**	**16.9**	0	0	**79.5**
		5/2/2018	**0.02**	< 1,000	**3.9**	**16.8**	0	0	**79.3**
B2A	15	5/1/2018	0.00	**1,000**	**4.3**	**16.0**	0	0	**79.6**
		5/2/2018	**0.02**	< 1,000	**0.8**	**17.0**	**1**	0	**82.1**
	30	5/1/2018	**0.01**	**1,000**	**4.5**	**16.1**	0	0	**79.4**
		5/2/2018	0.00	< 1,000	**4.7**	**15.3**	0	0	**80.0**
B3A	15	5/1/2018	0.00	**1,000**	**3.8**	**17.1**	0	0	**79.0**
		5/2/2018	**0.02**	< 1,000	**4.0**	**16.7**	0	0	**79.3**
	30	5/1/2018	0.00	**1,000**	**6.7**	**14.0**	0	0	**79.2**
		5/2/2018	**0.03**	< 1,000	**6.6**	**13.9**	0	0	**79.5**
B4A	15	5/1/2018	0.00	**1,000**	**2.0**	**18.2**	0	0	**79.7**
		5/2/2018	0.00	< 1,000	**1.9**	**17.5**	0	0	**80.5**
	30	5/1/2018	0.00	< 1,000	**5.0**	**15.7**	0	0	**79.2**
		5/2/2018	0.00	< 1,000	**3.5**	**16.4**	0	0	**80.0**
B5A	15	5/1/2018	0.00	< 1,000	**2.7**	**17.4**	0	0	**79.9**
		5/2/2018	0.00	< 1,000	**2.5**	**16.8**	0	0	**80.7**
	30	5/1/2018	0.00	**1,000**	**5.3**	**16.0**	0	0	**78.7**
		5/2/2018	**-0.02**	< 1,000	**5.2**	**15.4**	0	0	**79.4**
B6A	15	5/1/2018	0.00	< 1,000	**3.5**	**18.2**	0	0	**78.3**
		5/2/2018	**0.02**	< 1,000	**3.6**	**17.2**	0	0	**79.2**
	30	5/1/2018	**0.01**	< 1000	**3.5**	**18.0**	0	0	**78.4**
		5/2/2018	**-0.02**	< 1,000	**3.7**	**17.3**	0	0	**79.0**

In-H_2O Inches of water
ppmv parts per million by volume
% percent

Analytical Reports

Appendix A

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ANALYTICAL REPORT

May 08, 2018

Converse Consultants - Monrovia, CA

Sample Delivery Group:	L991065
Samples Received:	05/04/2018
Project Number:	18-41-139-02
Description:	10330-10384 Bellwood Avenue
Report To:	Michael Van Fleet 717 S. Myrtle Avenue Monrovia, CA 91016

Entire Report Reviewed By: Brian Ford

Brian Ford
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is

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B1A-15 L991065-01 Air

Collected by	Collected date/time	Received date/time
Spencer Wagner	05/01/18 08:45	05/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1107009	2	05/04/18 13:14	05/04/18 13:14	

B1A-30 L991065-02 Air

Collected by	Collected date/time	Received date/time
Spencer Wagner	05/01/18 08:47	05/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1107009	2	05/04/18 13:59	05/04/18 13:59	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1107337	25	05/05/18 14:41	05/05/18 14:41	

B2A-15 L991065-03 Air

Collected by	Collected date/time	Received date/time
Spencer Wagner	05/01/18 08:59	05/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1107009	2	05/04/18 14:45	05/04/18 14:45	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1107861	200	05/07/18 16:46	05/07/18 16:46	

B2A-30 L991065-04 Air

Collected by	Collected date/time	Received date/time
Spencer Wagner	05/01/18 09:02	05/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1107009	2	05/04/18 15:32	05/04/18 15:32	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1107337	25	05/05/18 16:15	05/05/18 16:15	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG1107861	400	05/07/18 17:27	05/07/18 17:27	

B3A-15 L991065-05 Air

Collected by	Collected date/time	Received date/time
Spencer Wagner	05/01/18 09:30	05/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1107009	2	05/04/18 16:19	05/04/18 16:19	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1107337	25	05/05/18 17:02	05/05/18 17:02	

B3A-30 L991065-06 Air

Collected by	Collected date/time	Received date/time
Spencer Wagner	05/01/18 09:31	05/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1107009	2	05/04/18 17:20	05/04/18 17:20	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1107337	25	05/05/18 17:49	05/05/18 17:49	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG1107861	200	05/07/18 18:08	05/07/18 18:08	

B4A-15 L991065-07 Air

Collected by	Collected date/time	Received date/time
Spencer Wagner	05/01/18 09:40	05/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1107009	2	05/04/18 18:05	05/04/18 18:05	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1107337	25	05/05/18 18:37	05/05/18 18:37	

B4A-30 L991065-08 Air

Collected by	Collected date/time	Received date/time
Spencer Wagner	05/01/18 09:42	05/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1107009	2	05/04/18 18:50	05/04/18 18:50	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1107337	25	05/05/18 19:24	05/05/18 19:24	

B5A-15 L991065-09 Air

Collected by	Collected date/time	Received date/time
Spencer Wagner	05/01/18 10:10	05/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1107009	2	05/04/18 19:34	05/04/18 19:34	

B5A-30 L991065-10 Air

Collected by	Collected date/time	Received date/time
Spencer Wagner	05/01/18 10:12	05/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1107009	2	05/04/18 20:18	05/04/18 20:18	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1107337	25	05/05/18 20:12	05/05/18 20:12	

B6A-15 L991065-11 Air

Collected by	Collected date/time	Received date/time
Spencer Wagner	05/01/18 10:30	05/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1107009	2	05/04/18 21:02	05/04/18 21:02	

B6A-30 L991065-12 Air

Collected by	Collected date/time	Received date/time
Spencer Wagner	05/01/18 10:35	05/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1107009	2	05/04/18 21:47	05/04/18 21:47	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1107337	25	05/05/18 20:59	05/05/18 20:59	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford

Brian Ford
Technical Service Representative

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.400	1.28	6.06	19.4			WG1107009
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1107009
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND			WG1107009
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1107009
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND			WG1107009
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1107009
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND			WG1107009
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1107009
Chloroform	67-66-3	119	0.400	1.95	1.35	6.58			WG1107009
Chloromethane	74-87-3	50.50	0.400	0.826	ND	ND		2	WG1107009
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND			WG1107009
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1107009
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND			WG1107009
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1107009
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND			WG1107009
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1107009
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND			WG1107009
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1107009
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	0.489	1.94			WG1107009
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1107009
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND			WG1107009
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1107009
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND			WG1107009
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1107009
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND			WG1107009
Ethanol	64-17-5	46.10	1.26	2.38	13.9	26.3		2	WG1107009
Ethylbenzene	100-41-4	106	0.400	1.73	1.49	6.46			WG1107009
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	0.453	2.55		2	WG1107009
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	60.5	299			WG1107009
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1107009
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND			WG1107009
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1107009
n-Hexane	110-54-3	86.20	0.400	1.41	21.6	76.1			WG1107009
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1107009
Methylene Chloride	75-09-2	84.90	0.400	1.39	0.701	2.43			WG1107009
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	6.16	25.2		2	WG1107009
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	27.9	82.4			WG1107009
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1107009
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND			WG1107009
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1107009
Styrene	100-42-5	104	0.400	1.70	0.418	1.78			WG1107009
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1107009
Tetrachloroethylene	127-18-4	166	0.400	2.72	66.0	448			WG1107009
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	41.2	121		2	WG1107009
Toluene	108-88-3	92.10	0.400	1.51	12.6	47.4			WG1107009
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1107009
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND			WG1107009
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1107009
Trichloroethylene	79-01-6	131	0.400	2.14	17.3	92.6			WG1107009
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	0.732	3.59		2	WG1107009
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	ND	ND			WG1107009
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1107009
m&p-Xylene	1330-20-7	106	0.800	3.47	4.95	21.5			WG1107009
o-Xylene	95-47-6	106	0.400	1.73	1.47	6.36		2	WG1107009
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	712	2940			WG1107009
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*77%*				WG1107009

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.400	1.28	8.10	25.9			WG1107009
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND			WG1107009
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND			WG1107009
Bromoform	75-25-2	253	1.20	12.4	ND	ND			WG1107009
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND			WG1107009
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND			WG1107009
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND			WG1107009
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND			WG1107009
Chloroform	67-66-3	119	0.400	1.95	5.93	28.9			WG1107009
Chloromethane	74-87-3	50.50	0.400	0.826	0.766	1.58			WG1107009
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND			WG1107009
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND			WG1107009
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND			WG1107009
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND			WG1107009
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND			WG1107009
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND			WG1107009
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND			WG1107009
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND			WG1107009
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND			WG1107009
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND			WG1107009
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND			WG1107009
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND			WG1107009
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND			WG1107009
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND			WG1107009
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND			WG1107009
Ethanol	64-17-5	46.10	1.26	2.38	15.9	29.9			WG1107009
Ethylbenzene	100-41-4	106	0.400	1.73	2.02	8.77			WG1107009
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	0.643	3.62			WG1107009
Dichlorodifluoromethane	75-71-8	120.92	5.00	24.7	197	977			WG1107337
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND			WG1107009
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND			WG1107009
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND			WG1107009
n-Hexane	110-54-3	86.20	0.400	1.41	16.8	59.3			WG1107009
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND			WG1107009
Methylene Chloride	75-09-2	84.90	0.400	1.39	2.51	8.73			WG1107009
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND			WG1107009
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	17.7	52.1			WG1107009
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND			WG1107009
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND			WG1107009
Naphthalene	91-20-3	128	1.26	6.60	ND	ND			WG1107009
Styrene	100-42-5	104	0.400	1.70	0.604	2.57			WG1107009
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND			WG1107009
Tetrachloroethylene	127-18-4	166	5.00	33.9	294	1990			WG1107337
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	12.2	36.0			WG1107009
Toluene	108-88-3	92.10	0.400	1.51	24.8	93.4			WG1107009
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND			WG1107009
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND			WG1107009
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND			WG1107009
Trichloroethylene	79-01-6	131	0.400	2.14	83.5	448			WG1107009
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	1.80	8.84			WG1107009
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	0.911	4.47			WG1107009
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND			WG1107009
m&p-Xylene	1330-20-7	106	0.800	3.47	6.84	29.7			WG1107009
o-Xylene	95-47-6	106	0.400	1.73	2.09	9.05			WG1107009
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	1090	4490			WG1107009
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*71%*				WG1107009

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*						WG1107337

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.400	1.28	5.61	17.9			WG1107009
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1107009
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND			WG1107009
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1107009
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND			WG1107009
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1107009
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND			WG1107009
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1107009
Chloroform	67-66-3	119	0.400	1.95	3.08	15.0			WG1107009
Chloromethane	74-87-3	50.50	0.400	0.826	2.67	5.52		2	WG1107009
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND			WG1107009
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1107009
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND			WG1107009
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1107009
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND			WG1107009
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1107009
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND			WG1107009
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1107009
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	0.833	3.30			WG1107009
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1107009
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND			WG1107009
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1107009
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND			WG1107009
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1107009
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND			WG1107009
Ethanol	64-17-5	46.10	1.26	2.38	8.96	16.9		2	WG1107009
Ethylbenzene	100-41-4	106	0.400	1.73	1.21	5.23			WG1107009
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1107009
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	32.7	161			WG1107009
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1107009
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND			WG1107009
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1107009
n-Hexane	110-54-3	86.20	0.400	1.41	81.2	286			WG1107009
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1107009
Methylene Chloride	75-09-2	84.90	0.400	1.39	ND	ND			WG1107009
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	6.00	24.5		2	WG1107009
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	12.6	37.2			WG1107009
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1107009
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND			WG1107009
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1107009
Styrene	100-42-5	104	0.400	1.70	ND	ND			WG1107009
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1107009
Tetrachloroethylene	127-18-4	166	40.0	272	1000	6790			WG1107861
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	41.0	121		2	WG1107009
Toluene	108-88-3	92.10	0.400	1.51	12.7	47.7			WG1107009
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1107009
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND			WG1107009
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1107009
Trichloroethylene	79-01-6	131	0.400	2.14	46.2	247			WG1107009
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	0.441	2.16		2	WG1107009
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	ND	ND			WG1107009
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1107009
m&p-Xylene	1330-20-7	106	0.800	3.47	4.12	17.8			WG1107009
o-Xylene	95-47-6	106	0.400	1.73	1.14	4.96		2	WG1107009
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	1300	5380			WG1107009
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*77%*				WG1107009

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*						WG1107861

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.400	1.28	7.40	23.6			WG1107009
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1107009
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND			WG1107009
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1107009
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND			WG1107009
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1107009
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND			WG1107009
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1107009
Chloroform	67-66-3	119	0.400	1.95	7.19	35.0			WG1107009
Chloromethane	74-87-3	50.50	0.400	0.826	ND	ND		2	WG1107009
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND			WG1107009
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1107009
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND			WG1107009
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1107009
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND			WG1107009
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1107009
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND			WG1107009
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1107009
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND			WG1107009
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1107009
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND			WG1107009
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1107009
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND			WG1107009
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1107009
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND			WG1107009
Ethanol	64-17-5	46.10	1.26	2.38	7.85	14.8		2	WG1107009
Ethylbenzene	100-41-4	106	0.400	1.73	4.87	21.1			WG1107009
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	0.947	5.32		2	WG1107009
Dichlorodifluoromethane	75-71-8	120.92	5.00	24.7	422	2090			WG1107337
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1107009
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	0.647	4.53			WG1107009
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1107009
n-Hexane	110-54-3	86.20	0.400	1.41	14.8	52.1			WG1107009
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1107009
Methylene Chloride	75-09-2	84.90	0.400	1.39	0.435	1.51			WG1107009
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1107009
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	11.6	34.1			WG1107009
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1107009
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND			WG1107009
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1107009
Styrene	100-42-5	104	0.400	1.70	1.24	5.27			WG1107009
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1107009
Tetrachloroethylene	127-18-4	166	80.0	543	4130	28000			WG1107861
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	11.4	33.7		2	WG1107009
Toluene	108-88-3	92.10	0.400	1.51	24.0	90.5			WG1107009
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1107009
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND			WG1107009
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1107009
Trichloroethylene	79-01-6	131	5.00	26.8	410	2200			WG1107337
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	4.51	22.1		2	WG1107009
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	1.94	9.52			WG1107009
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1107009
m&p-Xylene	1330-20-7	106	0.800	3.47	19.1	82.7			WG1107009
o-Xylene	95-47-6	106	0.400	1.73	5.74	24.9		2	WG1107009
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	1700	7010			WG1107009
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*137*				WG1107009

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*						WG1107337
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		94.7				WG1107861

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.400	1.28	1.51	4.81			WG1107009
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1107009
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND			WG1107009
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1107009
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND			WG1107009
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1107009
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND			WG1107009
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1107009
Chloroform	67-66-3	119	0.400	1.95	ND	ND			WG1107009
Chloromethane	74-87-3	50.50	0.400	0.826	ND	ND		2	WG1107009
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND			WG1107009
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1107009
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND			WG1107009
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1107009
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND			WG1107009
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1107009
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND			WG1107009
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1107009
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND			WG1107009
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1107009
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND			WG1107009
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1107009
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND			WG1107009
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1107009
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND			WG1107009
Ethanol	64-17-5	46.10	1.26	2.38	10.3	19.5		2	WG1107009
Ethylbenzene	100-41-4	106	0.400	1.73	1.22	5.29			WG1107009
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	0.688	3.87		2	WG1107009
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	98.6	488			WG1107009
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1107009
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND			WG1107009
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1107009
n-Hexane	110-54-3	86.20	0.400	1.41	4.51	15.9			WG1107009
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1107009
Methylene Chloride	75-09-2	84.90	0.400	1.39	0.480	1.67			WG1107009
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1107009
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	11.3	33.4			WG1107009
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1107009
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND			WG1107009
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1107009
Styrene	100-42-5	104	0.400	1.70	ND	ND			WG1107009
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1107009
Tetrachloroethylene	127-18-4	166	5.00	33.9	854	5800			WG1107337
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	31.7	93.4		2	WG1107009
Toluene	108-88-3	92.10	0.400	1.51	8.64	32.5			WG1107009
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1107009
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND			WG1107009
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1107009
Trichloroethylene	79-01-6	131	0.400	2.14	40.8	218			WG1107009
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	0.727	3.57		2	WG1107009
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	ND	ND			WG1107009
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1107009
m&p-Xylene	1330-20-7	106	0.800	3.47	4.97	21.5			WG1107009
o-Xylene	95-47-6	106	0.400	1.73	1.46	6.32		2	WG1107009
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	864	3570			WG1107009
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*N/A*				WG1107009

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*						WG1107337

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.400	1.28	1.38	4.40			WG1107009
Benzyl Chloride	100-44-7	127	0.400	2.08	0.460	2.39		2	WG1107009
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND			WG1107009
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1107009
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND			WG1107009
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1107009
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND			WG1107009
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1107009
Chloroform	67-66-3	119	0.400	1.95	0.571	2.78			WG1107009
Chloromethane	74-87-3	50.50	0.400	0.826	ND	ND		2	WG1107009
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND			WG1107009
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1107009
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND			WG1107009
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1107009
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND			WG1107009
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1107009
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND			WG1107009
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1107009
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND			WG1107009
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1107009
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND			WG1107009
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1107009
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND			WG1107009
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1107009
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND			WG1107009
Ethanol	64-17-5	46.10	1.26	2.38	8.64	16.3		2	WG1107009
Ethylbenzene	100-41-4	106	0.400	1.73	1.12	4.84			WG1107009
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	1.16	6.54		2	WG1107009
Dichlorodifluoromethane	75-71-8	120.92	5.00	24.7	490	2420			WG1107337
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1107009
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	0.672	4.70			WG1107009
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1107009
n-Hexane	110-54-3	86.20	0.400	1.41	1.03	3.63			WG1107009
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1107009
Methylene Chloride	75-09-2	84.90	0.400	1.39	ND	ND			WG1107009
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1107009
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	6.39	18.8			WG1107009
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1107009
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND			WG1107009
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1107009
Styrene	100-42-5	104	0.400	1.70	ND	ND			WG1107009
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1107009
Tetrachloroethylene	127-18-4	166	40.0	272	1670	11300			WG1107861
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	6.00	17.7		2	WG1107009
Toluene	108-88-3	92.10	0.400	1.51	2.91	10.9			WG1107009
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1107009
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND			WG1107009
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1107009
Trichloroethylene	79-01-6	131	0.400	2.14	55.8	299			WG1107009
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	8.65	42.5		2	WG1107009
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	2.82	13.9			WG1107009
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1107009
m&p-Xylene	1330-20-7	106	0.800	3.47	12.2	53.0			WG1107009
o-Xylene	95-47-6	106	0.400	1.73	4.95	21.4		2	WG1107009
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	888	3670			WG1107009
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*106*				WG1107009

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*						WG1107337
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		94.3				WG1107861

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.400	1.28	5.42	17.3			WG1107009
Benzyl Chloride	100-44-7	127	0.400	2.08	0.412	2.14		2	WG1107009
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND			WG1107009
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1107009
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND			WG1107009
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1107009
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND			WG1107009
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1107009
Chloroform	67-66-3	119	0.400	1.95	0.581	2.83			WG1107009
Chloromethane	74-87-3	50.50	0.400	0.826	0.586	1.21		2	WG1107009
2-Chlorotoluene	95-49-8	126	0.400	2.06	0.583	3.01			WG1107009
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1107009
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND			WG1107009
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1107009
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND			WG1107009
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1107009
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND			WG1107009
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1107009
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND			WG1107009
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1107009
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND			WG1107009
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1107009
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND			WG1107009
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1107009
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND			WG1107009
Ethanol	64-17-5	46.10	1.26	2.38	9.64	18.2		2	WG1107009
Ethylbenzene	100-41-4	106	0.400	1.73	3.20	13.9			WG1107009
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	0.470	2.64		2	WG1107009
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	73.1	362			WG1107009
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1107009
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND			WG1107009
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1107009
n-Hexane	110-54-3	86.20	0.400	1.41	10.3	36.4			WG1107009
Isopropylbenzene	98-82-8	120.20	0.400	1.97	0.501	2.47		2	WG1107009
Methylene Chloride	75-09-2	84.90	0.400	1.39	0.638	2.22			WG1107009
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1107009
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	10.7	31.7			WG1107009
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1107009
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND			WG1107009
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1107009
Styrene	100-42-5	104	0.400	1.70	0.901	3.83			WG1107009
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1107009
Tetrachloroethylene	127-18-4	166	5.00	33.9	231	1570			WG1107337
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	8.77	25.9		2	WG1107009
Toluene	108-88-3	92.10	0.400	1.51	18.0	67.7			WG1107009
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1107009
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND			WG1107009
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1107009
Trichloroethylene	79-01-6	131	0.400	2.14	3.66	19.6			WG1107009
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	9.81	48.2		2	WG1107009
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	5.06	24.8			WG1107009
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1107009
m&p-Xylene	1330-20-7	106	0.800	3.47	13.6	59.0			WG1107009
o-Xylene	95-47-6	106	0.400	1.73	4.30	18.7		2	WG1107009
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	1220	5020			WG1107009
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*152*		J1		WG1107009

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*						WG1107337

Sample Narrative:

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.400	1.28	3.50	11.2			WG1107009
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND			WG1107009
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND			WG1107009
Bromoform	75-25-2	253	1.20	12.4	ND	ND			WG1107009
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND			WG1107009
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND			WG1107009
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND			WG1107009
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND			WG1107009
Chloroform	67-66-3	119	0.400	1.95	3.17	15.4			WG1107009
Chloromethane	74-87-3	50.50	0.400	0.826	ND	ND			WG1107009
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND			WG1107009
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND			WG1107009
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND			WG1107009
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND			WG1107009
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND			WG1107009
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND			WG1107009
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND			WG1107009
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND			WG1107009
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND			WG1107009
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND			WG1107009
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND			WG1107009
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND			WG1107009
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND			WG1107009
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND			WG1107009
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND			WG1107009
Ethanol	64-17-5	46.10	1.26	2.38	2.69	5.07			WG1107009
Ethylbenzene	100-41-4	106	0.400	1.73	1.83	7.92			WG1107009
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	0.809	4.55			WG1107009
Dichlorodifluoromethane	75-71-8	120.92	5.00	24.7	341	1690			WG1107337
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND			WG1107009
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	0.472	3.30			WG1107009
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND			WG1107009
n-Hexane	110-54-3	86.20	0.400	1.41	6.82	24.0			WG1107009
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND			WG1107009
Methylene Chloride	75-09-2	84.90	0.400	1.39	ND	ND			WG1107009
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND			WG1107009
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	10.6	31.2			WG1107009
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND			WG1107009
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND			WG1107009
Naphthalene	91-20-3	128	1.26	6.60	ND	ND			WG1107009
Styrene	100-42-5	104	0.400	1.70	0.594	2.53			WG1107009
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND			WG1107009
Tetrachloroethylene	127-18-4	166	5.00	33.9	970	6590			WG1107337
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	21.4	63.2			WG1107009
Toluene	108-88-3	92.10	0.400	1.51	9.50	35.8			WG1107009
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND			WG1107009
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND			WG1107009
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND			WG1107009
Trichloroethylene	79-01-6	131	0.400	2.14	8.64	46.3			WG1107009
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	2.83	13.9			WG1107009
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	1.37	6.73			WG1107009
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND			WG1107009
m&p-Xylene	1330-20-7	106	0.800	3.47	6.46	28.0			WG1107009
o-Xylene	95-47-6	106	0.400	1.73	2.02	8.77			WG1107009
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	989	4080			WG1107009
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*72*				WG1107009

Collected date/time: 05/01/18 09:42

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*						WG1107337

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.400	1.28	4.36	13.9			WG1107009
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND			WG1107009
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND			WG1107009
Bromoform	75-25-2	253	1.20	12.4	ND	ND			WG1107009
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND			WG1107009
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND			WG1107009
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND			WG1107009
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND			WG1107009
Chloroform	67-66-3	119	0.400	1.95	0.470	2.29			WG1107009
Chloromethane	74-87-3	50.50	0.400	0.826	0.513	1.06			WG1107009
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND			WG1107009
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND			WG1107009
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND			WG1107009
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND			WG1107009
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND			WG1107009
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND			WG1107009
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND			WG1107009
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND			WG1107009
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND			WG1107009
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND			WG1107009
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND			WG1107009
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND			WG1107009
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND			WG1107009
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND			WG1107009
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND			WG1107009
Ethanol	64-17-5	46.10	1.26	2.38	60.8	115			WG1107009
Ethylbenzene	100-41-4	106	0.400	1.73	2.36	10.2			WG1107009
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND			WG1107009
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	15.2	75.0			WG1107009
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND			WG1107009
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND			WG1107009
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND			WG1107009
n-Hexane	110-54-3	86.20	0.400	1.41	4.08	14.4			WG1107009
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND			WG1107009
Methylene Chloride	75-09-2	84.90	0.400	1.39	4.58	15.9			WG1107009
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND			WG1107009
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	12.8	37.6			WG1107009
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND			WG1107009
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND			WG1107009
Naphthalene	91-20-3	128	1.26	6.60	ND	ND			WG1107009
Styrene	100-42-5	104	0.400	1.70	0.497	2.11			WG1107009
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND			WG1107009
Tetrachloroethylene	127-18-4	166	0.400	2.72	47.7	324			WG1107009
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	8.64	25.5			WG1107009
Toluene	108-88-3	92.10	0.400	1.51	18.6	70.2			WG1107009
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND			WG1107009
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND			WG1107009
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND			WG1107009
Trichloroethylene	79-01-6	131	0.400	2.14	0.823	4.41			WG1107009
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	1.96	9.64			WG1107009
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	0.753	3.70			WG1107009
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND			WG1107009
m&p-Xylene	1330-20-7	106	0.800	3.47	10.8	47.0			WG1107009
o-Xylene	95-47-6	106	0.400	1.73	3.47	15.0			WG1107009
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	551	2280			WG1107009
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*116*				WG1107009

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.400	1.28	1.75	5.59			WG1107009
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1107009
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND			WG1107009
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1107009
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND			WG1107009
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1107009
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND			WG1107009
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1107009
Chloroform	67-66-3	119	0.400	1.95	ND	ND			WG1107009
Chloromethane	74-87-3	50.50	0.400	0.826	0.793	1.64		2	WG1107009
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND			WG1107009
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1107009
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND			WG1107009
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1107009
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND			WG1107009
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1107009
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND			WG1107009
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1107009
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND			WG1107009
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1107009
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND			WG1107009
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1107009
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND			WG1107009
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1107009
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND			WG1107009
Ethanol	64-17-5	46.10	1.26	2.38	71.2	134		2	WG1107009
Ethylbenzene	100-41-4	106	0.400	1.73	1.44	6.24			WG1107009
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	0.448	2.52		2	WG1107009
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	57.1	282			WG1107009
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1107009
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND			WG1107009
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1107009
n-Hexane	110-54-3	86.20	0.400	1.41	2.09	7.36			WG1107009
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1107009
Methylene Chloride	75-09-2	84.90	0.400	1.39	4.39	15.2			WG1107009
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1107009
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	14.8	43.7			WG1107009
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1107009
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND			WG1107009
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1107009
Styrene	100-42-5	104	0.400	1.70	ND	ND			WG1107009
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1107009
Tetrachloroethylene	127-18-4	166	5.00	33.9	112	762			WG1107337
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	9.04	26.7		2	WG1107009
Toluene	108-88-3	92.10	0.400	1.51	15.9	59.8			WG1107009
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1107009
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND			WG1107009
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1107009
Trichloroethylene	79-01-6	131	0.400	2.14	0.806	4.32			WG1107009
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	0.963	4.73		2	WG1107009
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	ND	ND			WG1107009
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1107009
m&p-Xylene	1330-20-7	106	0.800	3.47	7.51	32.6			WG1107009
o-Xylene	95-47-6	106	0.400	1.73	2.58	11.2		2	WG1107009
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	631	2610			WG1107009
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*105*				WG1107009

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*						WG1107337

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.400	1.28	0.835	2.67			WG1107009
Benzyl Chloride	100-44-7	127	0.400	2.08	0.407	2.12		2	WG1107009
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND			WG1107009
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1107009
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND			WG1107009
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1107009
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND			WG1107009
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1107009
Chloroform	67-66-3	119	0.400	1.95	0.639	3.11			WG1107009
Chloromethane	74-87-3	50.50	0.400	0.826	ND	ND		2	WG1107009
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND			WG1107009
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1107009
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND			WG1107009
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1107009
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND			WG1107009
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1107009
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND			WG1107009
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1107009
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND			WG1107009
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1107009
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND			WG1107009
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1107009
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND			WG1107009
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1107009
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND			WG1107009
Ethanol	64-17-5	46.10	1.26	2.38	16.7	31.4		2	WG1107009
Ethylbenzene	100-41-4	106	0.400	1.73	1.17	5.06			WG1107009
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1107009
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	3.36	16.6			WG1107009
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1107009
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND			WG1107009
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1107009
n-Hexane	110-54-3	86.20	0.400	1.41	0.702	2.47			WG1107009
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1107009
Methylene Chloride	75-09-2	84.90	0.400	1.39	1.17	4.07			WG1107009
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	4.12	16.8		2	WG1107009
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	18.0	53.1			WG1107009
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1107009
MTBE	1634-04-4	88.10	0.400	1.44	0.525	1.89			WG1107009
Naphthalene	91-20-3	128	1.26	6.60	8.70	45.5		2	WG1107009
Styrene	100-42-5	104	0.400	1.70	ND	ND			WG1107009
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1107009
Tetrachloroethylene	127-18-4	166	0.400	2.72	28.9	196			WG1107009
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	7.59	22.4		2	WG1107009
Toluene	108-88-3	92.10	0.400	1.51	1.99	7.50			WG1107009
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1107009
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND			WG1107009
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1107009
Trichloroethylene	79-01-6	131	0.400	2.14	0.421	2.25			WG1107009
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	1.96	9.60		2	WG1107009
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	0.582	2.86			WG1107009
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1107009
m&p-Xylene	1330-20-7	106	0.800	3.47	2.14	9.28			WG1107009
o-Xylene	95-47-6	106	0.400	1.73	0.681	2.95		2	WG1107009
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	401	1660			WG1107009
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*106*				WG1107009

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.400	1.28	1.06	3.38			WG1107009
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1107009
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND			WG1107009
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1107009
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND			WG1107009
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1107009
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND			WG1107009
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1107009
Chloroform	67-66-3	119	0.400	1.95	1.90	9.25			WG1107009
Chloromethane	74-87-3	50.50	0.400	0.826	0.549	1.13		2	WG1107009
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND			WG1107009
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1107009
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND			WG1107009
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1107009
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND			WG1107009
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1107009
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND			WG1107009
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1107009
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND			WG1107009
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1107009
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND			WG1107009
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1107009
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND			WG1107009
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1107009
1,4-Dioxane	123-91-1	88.10	0.400	1.44	0.510	1.84			WG1107009
Ethanol	64-17-5	46.10	1.26	2.38	7.41	14.0		2	WG1107009
Ethylbenzene	100-41-4	106	0.400	1.73	0.703	3.05			WG1107009
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1107009
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	3.77	18.6			WG1107009
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1107009
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND			WG1107009
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1107009
n-Hexane	110-54-3	86.20	0.400	1.41	2.52	8.88			WG1107009
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1107009
Methylene Chloride	75-09-2	84.90	0.400	1.39	1.86	6.45			WG1107009
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1107009
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	11.5	33.9			WG1107009
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1107009
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND			WG1107009
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1107009
Styrene	100-42-5	104	0.400	1.70	ND	ND			WG1107009
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1107009
Tetrachloroethylene	127-18-4	166	5.00	33.9	88.4	600			WG1107337
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	22.3	65.8		2	WG1107009
Toluene	108-88-3	92.10	0.400	1.51	12.2	46.0			WG1107009
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1107009
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND			WG1107009
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1107009
Trichloroethylene	79-01-6	131	0.400	2.14	1.56	8.34			WG1107009
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	0.561	2.75		2	WG1107009
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	ND	ND			WG1107009
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1107009
m&p-Xylene	1330-20-7	106	0.800	3.47	2.71	11.8			WG1107009
o-Xylene	95-47-6	106	0.400	1.73	0.802	3.48		2	WG1107009
TPH (GC/MS) Low Fraction	8006-61-9	101	100	413	434	1790			WG1107009
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*107*				WG1107009

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*						WG1107337

Volatile Organic Compounds (MS) by Method TO-15

Method Blank (MB)

(MB) R3307263-3 05/04/18 10:34

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0460	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0436	0.200
Bromoform	U		0.0786	0.600
Bromomethane	U		0.0609	0.200
Carbon tetrachloride	U		0.0585	0.200
Chlorobenzene	U		0.0601	0.200
Chloroethane	U		0.0489	0.200
Chloroform	U		0.0574	0.200
Chloromethane	U		0.0544	0.200
2-Chlorotoluene	U		0.0605	0.200
Dibromochloromethane	U		0.0494	0.200
1,2-Dibromoethane	U		0.0185	0.200
1,2-Dichlorobenzene	U		0.0603	0.200
1,3-Dichlorobenzene	U		0.0597	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0616	0.200
1,1-Dichloroethane	U		0.0514	0.200
1,1-Dichloroethene	U		0.0490	0.200
cis-1,2-Dichloroethene	U		0.0389	0.200
trans-1,2-Dichloroethene	U		0.0464	0.200
1,2-Dichloropropane	U		0.0599	0.200
cis-1,3-Dichloropropene	U		0.0588	0.200
trans-1,3-Dichloropropene	U		0.0435	0.200
1,4-Dioxane	U		0.0554	0.200
Ethylbenzene	U		0.0506	0.200
Trichlorofluoromethane	U		0.0673	0.200
Dichlorodifluoromethane	U		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0687	0.200
1,2-Dichlorotetrafluoroethane	U		0.0458	0.200
Hexachloro-1,3-butadiene	U		0.0656	0.630
n-Hexane	U		0.0457	0.200
Isopropylbenzene	U		0.0563	0.200
Methylene Chloride	U		0.0465	0.200
Methyl Butyl Ketone	U		0.0682	1.25
2-Butanone (MEK)	U		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0650	1.25
MTBE	U		0.0505	0.200
Naphthalene	U		0.154	0.630
Styrene	U		0.0465	0.200

Volatile Organic Compounds (MS) by Method TO-15

Method Blank (MB)

(MB) R3307263-3 05/04/18 10:34

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
1,1,2,2-Tetrachloroethane	U		0.0576	0.200
Tetrachloroethylene	U		0.0497	0.200
Tetrahydrofuran	U		0.0508	0.200
Toluene	U		0.0499	0.200
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0665	0.200
1,1,2-Trichloroethane	U		0.0287	0.200
Trichloroethylene	U		0.0545	0.200
1,2,4-Trimethylbenzene	U		0.0483	0.200
1,3,5-Trimethylbenzene	U		0.0631	0.200
Vinyl chloride	U		0.0457	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
Ethanol	U		0.0832	0.630
TPH (GC/MS) Low Fraction	U		6.91	50.0
(S) 1,4-Bromofluorobenzene	*98.6*			60.0-140

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3307263-1 05/04/18 09:03 • (LCSD) R3307263-2 05/04/18 09:48

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	3.65	3.68	97.3	98.2	52.0-158			0.991	25
Dichlorodifluoromethane	3.75	4.52	4.56	121	122	69.0-143			0.861	25
1,2-Dichlorotetrafluoroethane	3.75	4.20	4.23	112	113	70.0-130			0.653	25
Chloromethane	3.75	4.25	4.25	113	113	70.0-130			0.0414	25
Vinyl chloride	3.75	4.20	4.20	112	112	70.0-130			0.0719	25
Bromomethane	3.75	4.33	4.22	115	113	70.0-130			2.52	25
Chloroethane	3.75	4.17	4.19	111	112	70.0-130			0.298	25
Trichlorofluoromethane	3.75	4.17	4.18	111	112	70.0-130			0.188	25
1,1,2-Trichlorotrifluoroethane	3.75	4.21	4.22	112	112	70.0-130			0.109	25
1,1-Dichloroethene	3.75	4.13	4.12	110	110	70.0-130			0.195	25
1,1-Dichloroethane	3.75	4.10	4.10	109	109	70.0-130			0.145	25
Methylene Chloride	3.75	3.87	3.88	103	103	70.0-130			0.265	25
MTBE	3.75	4.10	4.08	109	109	70.0-130			0.353	25
trans-1,2-Dichloroethene	3.75	4.10	4.08	109	109	70.0-130			0.424	25
n-Hexane	3.75	4.06	4.05	108	108	70.0-130			0.302	25
Methyl Ethyl Ketone	3.75	4.17	4.18	111	111	70.0-130			0.166	25
cis-1,2-Dichloroethene	3.75	4.10	4.08	109	109	70.0-130			0.459	

Volatile Organic Compounds (MS) by Method TO-15

L991065-01,02,03,04,05,06,07,08,09,10,11,12

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3307263-1 05/04/18 09:03 • (LCSD) R3307263-2 05/04/18 09:48

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloroform	3.75	4.08	4.07	109	108	70.0-130			0.419	25
1,1,1-Trichloroethane	3.75	4.12	4.10	110	109	70.0-130			0.332	25
Carbon tetrachloride	3.75	4.12	4.12	110	110	70.0-130			0.00948	25
Benzene	3.75	4.08	4.08	109	109	70.0-130			0.00563	25
1,2-Dichloroethane	3.75	4.08	4.07	109	109	70.0-130			0.0934	25
Trichloroethylene	3.75	4.06	4.11	108	110	70.0-130			1.23	25
1,2-Dichloropropane	3.75	4.08	4.08	109	109	70.0-130			0.00377	25
1,4-Dioxane	3.75	4.20	4.20	112	112	70.0-152			0.0493	25
Bromodichloromethane	3.75	4.12	4.12	110	110	70.0-130			0.150	25
cis-1,3-Dichloropropene	3.75	4.20	4.19	112	112	70.0-130			0.254	25
4-Methyl-2-pentanone (MIBK)	3.75	4.13	4.13	110	110	70.0-142			0.144	25
Toluene	3.75	4.17	4.15	111	111	70.0-130			0.301	25
trans-1,3-Dichloropropene	3.75	4.27	4.29	114	114	70.0-130			0.452	25
1,1,2-Trichloroethane	3.75	4.06	4.07	108	109	70.0-130			0.428	25
Tetrachloroethylene	3.75	4.12	4.10	110	109	70.0-130			0.520	25
Methyl Butyl Ketone	3.75	4.40	4.40	117	117	70.0-150			0.0326	25
Dibromochloromethane	3.75	4.23	4.26	113	114	70.0-130			0.594	25
1,2-Dibromoethane	3.75	4.24	4.26	113	113	70.0-130			0.372	25
Chlorobenzene	3.75	4.21	4.22	112	113	70.0-130			0.356	25
Ethylbenzene	3.75	4.29	4.28	114	114	70.0-130			0.345	25
m&p-Xylene	7.50	8.56	8.53	114	114	70.0-130			0.345	25
o-Xylene	3.75	4.27	4.26	114	114	70.0-130			0.274	25
Styrene	3.75	4.46	4.44	119	118	70.0-130			0.412	25
Bromoform	3.75	4.38	4.39	117	117	70.0-130			0.173	25
1,1,2,2-Tetrachloroethane	3.75	4.24	4.24	113	113	70.0-130			0.0796	25
1,3,5-Trimethylbenzene	3.75	4.43	4.40	118	117	70.0-130			0.634	25
1,2,4-Trimethylbenzene	3.75	4.39	4.38	117	117	70.0-130			0.317	25
1,3-Dichlorobenzene	3.75	4.49	4.47	120	119	70.0-130			0.602	25
1,4-Dichlorobenzene	3.75	4.61	4.56	123	122	70.0-130			1.05	25
Benzyl Chloride	3.75	4.68	4.62	125	123	70.0-144			1.45	25
1,2-Dichlorobenzene	3.75	4.42	4.38	118	117	70.0-130			0.714	25
1,2,4-Trichlorobenzene	3.75	4.42	4.34	118	116	70.0-155			1.73	25
Hexachloro-1,3-butadiene	3.75	4.39	4.39	117	117	70.0-145			0.00868	25
Naphthalene	3.75	4.39	4.31	117	115	70.0-155			1.89	25
TPH (GC/MS) Low Fraction	176	197	197	112	112	70.0-130			0.318	25
2-Chlorotoluene	3.75	4.36	4.36	116	116	70.0-130			0.0328	25
Tetrahydrofuran	3.75	4.04	4.03	108	107	70.0-140			0.316	25
Isopropylbenzene	3.75	4.29	4.28	114	114	70.0-130			0.158	25
(S) 1,4-Bromofluorobenzene				*102*	*102*	60.0-140				

Volatile Organic Compounds (MS) by Method TO-15

Method Blank (MB)

(MB) R3307453-3 05/05/18 10:40

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Dichlorodifluoromethane	U		0.0601	0.200
Tetrachloroethylene	U		0.0497	0.200
Trichloroethylene	U		0.0545	0.200
(S) 1,4-Bromofluorobenzene	*95.6*			60.0-140

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3307453-1 05/05/18 09:02 • (LCSD) R3307453-2 05/05/18 09:51

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dichlorodifluoromethane	3.75	4.06	4.21	108	112	69.0-143			3.52	25
Trichloroethylene	3.75	4.20	4.18	112	112	70.0-130			0.352	25
Tetrachloroethylene	3.75	4.28	4.25	114	113	70.0-130			0.555	25
(S) 1,4-Bromofluorobenzene				*100*	*102*	60.0-140				

Volatile Organic Compounds (MS) by Method TO-15

Method Blank (MB)

(MB) R3307731-2 05/07/18 09:54

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Tetrachloroethylene	U		0.0497	0.200
(S) 1,4-Bromofluorobenzene	*98.1*			60.0-140

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3307731-1 05/07/18 08:26 • (LCSD) R3307731-3 05/07/18 10:37

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Tetrachloroethylene	3.75	4.45	4.43	119	118	70.0-130			0.557	25
(S) 1,4-Bromofluorobenzene				*97.1*	*100*	60.0-140				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J1	

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please

Company Name/Address:
Converse Consultants
717 S. Myrtle Avenue
Monrovia, CA 91016

Billing Information:

Report to: Mike Van Fleet

Email To: mvanfleet@converseconsultants.com

Project Description: 10330 - 10384 Bellwood Avenue

City/State Collected: Los Angeles, CA

Phone: Fax: 626 930-1200

Client Project #: 18-41-139-02

Lab Project #

Collected by (print): S. Wagner

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
X Three Day 25%

Date Results Needed

Email? ___No ___Yes
FAX? ___No ___Yes

Canister Pressure/Vacuum

Analysis: TO-15

Chain of Custody Page 1 of 3

ESC LAB SCIENCES
12065 Lebanon Rd
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Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L991065

M021

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Sample Description	Can #	Date	Time	Initial	Final	TO-15				Rem./Contaminant	Sample # (lab only)
B1A-15		5192	5/1/18	8:45	29	5	X					-01
B1A-30		6285	↓	8:47	29	3	X					02
B2A-15		7363	↓	8:59	27.5	3	X					03
B2A-30		9034	↓	9:02	28.5	3	X					04

Remarks: 4044 8309 0791

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ ____	Condition: (lab use only)
	5/1/18	0959	5/2 1750		
Relinquished by : (Signature)	Date: 5/3/18	Time: 1100	Received by: (Signature)	Temp: Amb °C Bottles Received: 12	COC Seal Intact: ___Y ___N ___NA
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) 610	Date: 5/4/18 Time: 845	pH Checked: NCF:

Company Name/Address:
Converse Consultants
717 S. Myrtle Avenue
Monrovia, CA 91016

Billing Information:

Analysis

Chain of Custody Page 2 of 3

ESC LAB SCIENCES
a subsidiary of Pace National
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: Mike Van Fleet

Email To: mvanfleet@converseconsultants.com

Project Description: 18330 - 18384 Bellwood Avenue

City/State Collected: Los Angeles CA

Phone: Fax: 626 930-1200

Client Project # 18-41-139-02

Lab Project #

L# L991065

Table #

Collected by (print): S. Wagner

Site/Facility ID #

P.O. #

Acctnum:

Template:

Prelogin:

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
X Three Day 25%

Date Results Needed

Email? ___No ___Yes
FAX? ___No ___Yes

Canister Pressure/Vacuum

TSR:
PB:

Shipped Via:

Sample ID	Sample Description	Can #	Date	Time	Initial	Final	TO-15				Rem./Contaminant	Sample # (lab only)
B3A-15		9202	5/1/18	9:30	30	3	X					-05
B3A-30		5566	↓	9:31	28.5	0	X					06
B4A-15		7674	↓	9:40	23	2	X					07
B4A-30		5240	↓	9:42	30	3	X					08

Remarks: 4014 8309 0770

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ____	Condition: (lab use only)
	5/1/18	0957	5/2 1750		
Relinquished by : (Signature)	Date: 5/3/18	Time: 1100	Received by: (Signature)	Temp: AmB °C Bottles Received: 12	COC Seal Intact: ___Y ___N ___NA
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5/4/18 Time: 845	pH Checked: NCF:

Company Name/Address:
Converse Consultants
717 S. Myrtle Avenue
Monrovia, CA

Billing Information:

Analysis: TO-15

Chain of Custody Page 2 of 3

ESC LAB SCIENCES

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: Mike Van Fleet

Email To: mvanfleet@converseconsultants.com

Project Description: 10330 - 10884 Bolwood Avenue

City/State Collected: Los Angeles, CA

Phone: Fax: 626 930-1200

Client Project # 18-41-139-02

Lab Project #

L# L991069

Table #

Collected by (print): S. Wagner

Site/Facility ID #

P.O. #

Acctnum:

Template:

Prelogin:

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
X Three Day 25%

Date Results Needed

Email? ___No ___Yes
FAX? ___No ___Yes

Canister Pressure/Vacuum

TSR:

PB:

Shipped Via:

Sample ID	Sample Description	Can #	Date	Time	Initial	Final	TO-15				Rem./Contaminant	Sample # (lab only)
B5A-15		6265	5/1/18	10:10	19	2	X					09
B5A-30		7651	↓	10:12	16	1	X					10
B6A-15		9026	↓	10:30	30	3	X					11
B6A-30		7155	↓	10:35	25	2	X					12

Remarks: 4047 8309 0780

Hold #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ____	Condition: (lab use only)
	5/1/18	0957	572 1750		
Relinquished by: (Signature)	Date: 5/3/18	Time: 1100	Received by: (Signature)	Temp: AmB °C Bottles Received: 12	COC Seal Intact: ___Y ___N ___NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5/4/18 Time: 845	pH Checked: NCF:

ESC LAB SCIENCES
Cooler Receipt Form

Client: CONCONMCA	SDG#	L991065	
Cooler Received/Opened On: 5/4/18	Temperature:	AMB	
Received By: Christian Kacar			
Signature:			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

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Ordered By

Converse Consultants
717 S. Myrtle Ave.
Monrovia, CA 91016-

Telephone: (626)930-1200
Attention: Michael Van Fleet

Number of Pages 28
Date Received 04/30/2018
Date Reported 05/03/2018

Job Number	Order Date	Client
92472	04/30/2018	CONVRS

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.
Site: 10330-10384 Bellwood Ave.
Los Angeles, CA 90064

Enclosed please find results of analyses of 12 soil samples which were analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

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CHAIN OF CUSTODY RECORD

101178

AETL JOB No. 92472

COMPANY: Converse
PROJECT MANAGER: MVF
COMPANY ADDRESS: 717 S. Myrtle Avenue
PHONE:
FAX:
PROJECT NAME:
PROJECT #: 18-41-139-01
SITE NAME AND ADDRESS: 10330 - 10384 Bellwood Ave, Los Angeles CA
PO #:

ANALYSIS REQUESTED

	SAMPLE ID	LAB ID	DATE	TIME	MATRIX	CONTAINER NUMBER/SIZE	PRES.	8260B	8015M		HOLD								TEST INSTRUCTIONS & COMMENTS
1	B1A-5	92472.01	4/30/18	8:10	SOIL	2 encore / 1 jar/blue	ice	X	X										
2	-10	92472.02		8:12							X								
3	-15	92472.03		8:14							X								
4	-20	92472.04		8:16				X	X										
5	-25	92472.05		8:18							X								
6	-30	92472.06		8:20							X								
7	B2A-5	92472.07		9:10				X	X										
8	-10	92472.08		9:12				X	X										
9	-15	92472.09		9:15							X								
10	-20	92472.10		9:17							X								
11	-25	92472.11		9:19							X								
	-30	92472.12		9:21							X								
13	B3A-5	92472.13		8:05				X	X										
14	-10	92472.14		8:07							X								
15	-15	92472.15		8:09				X	X										

SAMPLE RECEIPT - TO BE FILLED BY LABORATORY

TOTAL NUMBER OF CONTAINERS	30	PROPERLY COOLED Y / N / NA	
CUSTODY SEALS Y / N / NA		SAMPLES INTACT Y / N / NA	
RECEIVED IN GOOD COND. Y / N		SAMPLES ACCEPTED Y / N	

TURN AROUND TIME

☐ NORMAL ☒ RUSH
☐ SAME DAY
☐ NEXT DAY
☐ 2 DAYS
☒ 3 DAYS

DATA DELIVERABLE REQUIRED

☐ HARD COPY
☐ PDF
☐ GEOTRACKER (GLOBAL ID) _____
☐ OTHER (PLEASE SPECIFY) _____

RELINQUISHED BY SAMPLER: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature:	Signature:	Signature:
Printed Name: Spencer Wagner	Printed Name:	Printed Name: Sargis
Date: 4/30/18 Time: 12:20	Date: Time:	Date: 4/30/18 Time: 1340
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY LABORATORY: 3.** AETL
Signature:	Signature:	Signature:
Printed Name: Sargis V	Printed Name:	Printed Name: Jeanclaude
Date: 4/30/18 Time: 1220	Date: Time:	Date: 04/30/18 Time: 1340

DISTRIBUTION: WHITE - Laboratory, CANARY - Laboratory, PINK - Project/Account Manager, YELLOW - Sampler/Originator

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CHAIN OF CUSTODY RECORD

104634

AETL JOB No. 92472

COMPANY: Converse
PROJECT MANAGER: MVF
COMPANY ADDRESS:
PHONE:
FAX:
PROJECT NAME:
PROJECT #: 18-41-139-01
SITE NAME AND ADDRESS: 10330-10384 Bellwood Avenue, Los Angeles, CA
PO #:

ANALYSIS REQUESTED

	SAMPLE ID	LAB ID	DATE	TIME	MATRIX	CONTAINER NUMBER/SIZE	PRES.	8260B	8015M	HOLD	TEST INSTRUCTIONS & COMMENTS
1	B3A-20	92472.16	4/30/18	8:11	SOIL	2 encore/jar/sleeve	ice			X	
2	-25	92472.17		8:13						X	
3	-30	92472.18		8:15						X	
4	B4A-5	92472.19		10:50				X	X		
5	-10	92472.20		10:52						X	
6	-15	92472.21		10:54				X	X		
7	-20	92472.22		10:56						X	
8	-25	92472.23		10:58						X	
9	-30	92472.24		11:00						X	
10	B5A-5	92472.25		9:15				X	X		
11	-10	92472.26		9:17				X	X		
12	-15	92472.27		9:19						X	
13	-20	92472.28		9:21						X	
14	-25	92472.29		9:23						X	
15	-30	92472.30		9:25						X	

SAMPLE RECEIPT - TO BE FILLED BY LABORATORY

TOTAL NUMBER OF CONTAINERS	30	PROPERLY COOLED	Y / N / NA
CUSTODY SEALS	Y / N / NA	SAMPLES INTACT	Y / N / NA
RECEIVED IN GOOD COND	Y / N	SAMPLES ACCEPTED	Y / N

TURN AROUND TIME

☐ NORMAL ☒ RUSH
☐ SAME DAY
☐ NEXT DAY
☐ 2 DAYS
☒ 3 DAYS

DATA DELIVERABLE REQUIRED

☐ HARD COPY
☒ PDF
☐ GEOTRACKER (GLOBAL ID) _____
☐ OTHER (PLEASE SPECIFY) _____

RELINQUISHED BY SAMPLER: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature:	Signature:	Signature:
Printed Name: Spencer Wagner	Printed Name:	Printed Name:
Date: 4/30/18 Time: 12:20	Date: Time:	Date: 4/30/18 Time: 1340
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY LABORATORY: 3.**
Signature:	Signature:	Signature: AETL
Printed Name:	Printed Name:	Printed Name:
Date: 4/30/18 Time: 1220	Date: Time:	Date: 04/30/18 Time: 1340

DISTRIBUTION: WHITE - Laboratory, CANARY - Laboratory, PINK - Project/Account Manager, YELLOW - Sampler/Originator

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CHAIN OF CUSTODY RECORD

№ 92214

AETL JOB No. 92472

COMPANY: Converse
PROJECT MANAGER: MVF
COMPANY ADDRESS: 717 S. Myrtle Avenue
PHONE:
FAX:
PROJECT NAME:
PROJECT #: 18-41-139-01
SITE NAME AND ADDRESS: 10330-10384 Bellwood Ave Los Angeles CA
PO #:

ANALYSIS REQUESTED

	SAMPLE ID	LAB ID	DATE	TIME	MATRIX	CONTAINER NUMBER/SIZE	PRES.	8260B	8015M		HOLD							TEST INSTRUCTIONS & COMMENTS
1	B6A-5	92472-31	4/30/18	10:55	SOIL	2 encore / 1 sleeve	ice	X	X									
2	-10	92472-32	↓	10:57	↓	↓	↓				X							
3	-15	92472-33	↓	10:59	↓	↓	↓				X							
4	-20	92472-34	↓	11:01	↓	↓	↓	X	X									
5	-25	92472-35	↓	11:03	↓	↓	↓				X							
6	-30	92472-36	↓	11:05	↓	↓	↓				X							
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

SAMPLE RECEIPT - TO BE FILLED BY LABORATORY

TOTAL NUMBER OF CONTAINERS	12	PROPERLY COOLED Y / N / NA	
CUSTODY SEALS Y / N / NA		SAMPLES INTACT Y / N / NA	
RECEIVED IN GOOD COND. Y / N		SAMPLES ACCEPTED Y / N	

TURN AROUND TIME

☐ NORMAL ☒ RUSH
☐ SAME DAY
☐ NEXT DAY
☐ 2 DAYS
☒ 3 DAYS

DATA DELIVERABLE REQUIRED

☐ HARD COPY
☐ PDF
☐ GEOTRACKER (GLOBAL ID) _____
☐ OTHER (PLEASE SPECIFY) _____

RELINQUISHED BY SAMPLER: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: [signature]	Signature:	Signature: [signature]
Printed Name: Spencer Wagner	Printed Name:	Printed Name: Sargis
Date: 4/30/18 Time: 12:20	Date: Time:	Date: 4/30/18 Time: 1340
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY LABORATORY: AETL 3.**
Signature: [signature]	Signature:	Signature: [signature]
Printed Name: Sargis	Printed Name:	Printed Name: Jean Claude
Date: 4/30/18 Time: 1220	Date: Time:	Date: 04/30/18 Time: 1340

DISTRIBUTION: WHITE - Laboratory, CANARY - Laboratory, PINK - Project/Account Manager, YELLOW - Sampler/Originator

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COOLER RECEIPT FORM

Client Name: Converse

Project Name:

AETL Job Number: 92472

Date Received: 04/30/18 Received by: Jean Claude

Carrier: ☒ AETL Courier ☐ Client ☐ GSO ☐ FedEx ☐ UPS

☐ Others:

Samples were received in: ☒ Cooler (↑) ☐ Other (Specify):

Inside temperature of shipping container No 1: 2.9°C, No 2: _____, No 3: _____

Type of sample containers: ☐ VOA, ☐ Glass bottles, ☒ Wide mouth jars, ☐ HDPE bottles, ☐ Metal sleeves, ☒ Others (Specify): Encore + Acet. tube

How are samples preserved: ☐ None, ☒ Ice, ☐ Blue Ice, ☐ Dry Ice

☒ None, _ HNO_3, _ NaOH, _ ZnOAc, _ HCl, _ $Na_2S_2O_3$, _ MeOH

_ Other (Specify):

	Yes	No, explain below	Name, if client was notified.
1. Are the COCs Correct?	✓		
2. Are the Sample labels legible?	✓		
3. Do samples match the COC?	✓		
4. Are the required analyses clear?	✓		
5. Is there enough samples for required analysis?	✓		
6. Are samples sealed with evidence tape?	NA		
7. Are sample containers in good condition?	✓		
8. Are samples preserved?	✓		
9. Are samples preserved properly for the intended analysis?	✓		
10. Are the VOAs free of headspace?	NA		
11. Are the jars free of headspace?	✓		

Explain all "No" answers for above questions:

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Ordered By

Converse Consultants
717 S. Myrtle Ave.
Monrovia, CA 91016-

Project ID: 18-41-139-01
Date Received 04/30/2018
Date Reported 05/03/2018

Telephone: (626)930-1200
Attention: Michael Van Fleet

Job Number	Order Date	Client
92472	04/30/2018	CONVRS

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

AETL received 36 samples with the following specification on 04/30/2018.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers
92472.01	B1A-5	04/30/2018	Soil	2
92472.04	B1A-20	04/30/2018	Soil	2
92472.07	B2A-5	04/30/2018	Soil	2
92472.08	B2A-10	04/30/2018	Soil	2
92472.13	B3A-5	04/30/2018	Soil	2
92472.15	B3A-15	04/30/2018	Soil	2
92472.19	B4A-5	04/30/2018	Soil	2
92472.21	B4A-15	04/30/2018	Soil	2
92472.25	B5A-5	04/30/2018	Soil	2
92472.26	B5A-10	04/30/2018	Soil	2
92472.31	B6A-5	04/30/2018	Soil	2
92472.34	B6A-20	04/30/2018	Soil	2

Method ^ Submethod	Req Date	Priority	TAT	Units
(8260B)	05/03/2018	4	Rush	ug/Kg
(M8015D) ^ C13-C40	05/03/2018	4	Rush	mg/Kg
(M8015G)	05/03/2018	4	Rush	mg/Kg

92472.02	B1A-10	04/30/2018	Soil	2
92472.03	B1A-15	04/30/2018	Soil	2
92472.05	B1A-25	04/30/2018	Soil	2
92472.06	B1A-30	04/30/2018	Soil	2
92472.09	B2A-15	04/30/2018	Soil	2
92472.10	B2A-20	04/30/2018	Soil	2
92472.11	B2A-25	04/30/2018	Soil	2
92472.12	B2A-30	04/30/2018	Soil	2
92472.14	B3A-10	04/30/2018	Soil	2

Continued

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Ordered By

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Monrovia, CA 91016-

Project ID: 18-41-139-01
Date Received 04/30/2018
Date Reported 05/03/2018

Telephone: (626)930-1200
Attention: Michael Van Fleet

Job Number	Order Date	Client
92472	04/30/2018	CONVRS

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

92472.16	B3A-20	04/30/2018	Soil	2
92472.17	B3A-25	04/30/2018	Soil	2
92472.18	B3A-30	04/30/2018	Soil	2
92472.20	B4A-10	04/30/2018	Soil	2
92472.22	B4A-20	04/30/2018	Soil	2
92472.23	B4A-25	04/30/2018	Soil	2
92472.24	B4A-30	04/30/2018	Soil	2
92472.27	B5A-15	04/30/2018	Soil	2
92472.28	B5A-20	04/30/2018	Soil	2
92472.29	B5A-25	04/30/2018	Soil	2
92472.30	B5A-30	04/30/2018	Soil	2
92472.32	B6A-10	04/30/2018	Soil	2
92472.33	B6A-15	04/30/2018	Soil	2
92472.35	B6A-25	04/30/2018	Soil	2
92472.36	B6A-30	04/30/2018	Soil	2

Method ^ Submethod	*Req Date*	*Priority*	*TAT*	*Units*
ARCHIVE	05/03/2018	4	Rush	--

The samples were analyzed as specified on the enclosed chain of custody. Analytical non-conformances have been noted on the report.

Unless otherwise noted, all results of soil and solid samples are based on wet weight.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

American Environmental Testing Laboratory Inc.

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ANALYTICAL RESULTS

Ordered By

Converse Consultants
717 S. Myrtle Ave.
Monrovia, CA 91016-

Telephone: (626)930-1200
Attn: Michael Van Fleet
Page: 2

Site

10330-10384 Bellwood Ave.
Los Angeles, CA 90064

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0430182A1

Our Lab I.D.			Method Blank	92472.01	92472.04	92472.07	
Client Sample I.D.				B1A-5	B1A-20	B2A-5	
Date Sampled				04/30/2018	04/30/2018	04/30/2018	
Date Prepared			04/30/2018	04/30/2018	04/30/2018	04/30/2018	
Preparation Method			5030	5035A	5035A	5035A	
Date Analyzed			04/30/2018	04/30/2018	04/30/2018	04/30/2018	
Matrix			Soil	Soil	Soil	Soil	
Units			ug/Kg	ug/Kg	ug/Kg	ug/Kg	
Dilution Factor			1	1	1	1	
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	
Acetone	25	50	ND	ND	ND	ND	
Benzene	1.0	10.0	ND	ND	ND	ND	
Bromobenzene (Phenyl bromide)	5.0	10.0	ND	ND	ND	ND	
Bromochloromethane	5.0	10.0	ND	ND	ND	ND	
Bromodichloromethane	5.0	10.0	ND	ND	ND	ND	
Bromoform (Tribromomethane)	25	50	ND	ND	ND	ND	
Bromomethane (Methyl bromide)	15	30	ND	ND	ND	ND	
2-Butanone (MEK)	25	50	ND	ND	ND	ND	
n-Butylbenzene	5.0	10.0	ND	ND	ND	ND	
sec-Butylbenzene	5.0	10.0	ND	ND	ND	ND	
tert-Butylbenzene	5.0	10.0	ND	ND	ND	ND	
Carbon Disulfide	25	50	ND	ND	ND	ND	
Carbon tetrachloride	5.0	10.0	ND	ND	ND	ND	
Chlorobenzene	5.0	10.0	ND	ND	ND	ND	
Chloroethane	15	30	ND	ND	ND	ND	
2-Chloroethyl vinyl ether	50	50	ND	ND	ND	ND	
Chloroform (Trichloromethane)	5.0	10.0	ND	ND	ND	ND	
Chloromethane (Methyl chloride)	15	30	ND	ND	ND	ND	
2-Chlorotoluene	5.0	10.0	ND	ND	ND	ND	
4-Chlorotoluene	5.0	10.0	ND	ND	ND	ND	
1,2-Dibromo-3-chloropropane (DBCP)	5.0	10.0	ND	ND	ND	ND	
Dibromochloromethane	5.0	10.0	ND	ND	ND	ND	
1,2-Dibromoethane (EDB)	5.0	10.0	ND	ND	ND	ND	
Dibromomethane	5.0	10.0	ND	ND	ND	ND	
1,2-Dichlorobenzene	5.0	10.0	ND	ND	ND	ND	
1,3-Dichlorobenzene	5.0	10.0	ND	ND	ND	ND	
1,4-Dichlorobenzene	5.0	10.0	ND	ND	ND	ND	
Dichlorodifluoromethane	15	30	ND	ND	ND	ND	

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ANALYTICAL RESULTS

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0430182A1

Our Lab I.D.			Method Blank	92472.01	92472.04	92472.07	
Client Sample I.D.				B1A-5	B1A-20	B2A-5	
Date Sampled				04/30/2018	04/30/2018	04/30/2018	
Date Prepared			04/30/2018	04/30/2018	04/30/2018	04/30/2018	
Preparation Method			5030	5035A	5035A	5035A	
Date Analyzed			04/30/2018	04/30/2018	04/30/2018	04/30/2018	
Matrix			Soil	Soil	Soil	Soil	
Units			ug/Kg	ug/Kg	ug/Kg	ug/Kg	
Dilution Factor			1	1	1	1	
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	
1,1-Dichloroethane	5.0	10.0	ND	ND	ND	ND	
1,2-Dichloroethane (EDC)	5.0	10.0	ND	ND	ND	ND	
1,1-Dichloroethene	5.0	10.0	ND	ND	ND	ND	
cis-1,2-Dichloroethene	5.0	10.0	ND	ND	ND	ND	
trans-1,2-Dichloroethene	5.0	10.0	ND	ND	ND	ND	
1,2-Dichloropropane	5.0	10.0	ND	ND	ND	ND	
1,3-Dichloropropane	5.0	10.0	ND	ND	ND	ND	
2,2-Dichloropropane	5.0	10.0	ND	ND	ND	ND	
1,1-Dichloropropene	5.0	10.0	ND	ND	ND	ND	
cis-1,3-Dichloropropene	5.0	10.0	ND	ND	ND	ND	
trans-1,3-Dichloropropene	5.0	10.0	ND	ND	ND	ND	
Ethylbenzene	1.0	10.0	ND	ND	ND	ND	
Hexachlorobutadiene	15	30	ND	ND	ND	ND	
2-Hexanone	25	50	ND	ND	ND	ND	
Iodomethane	5.0	10.0	ND	ND	ND	ND	
Isopropylbenzene	5.0	10.0	ND	ND	ND	ND	
p-Isopropyltoluene	5.0	10.0	ND	ND	ND	ND	
4-Methyl-2-pentanone (MIBK)	25	50	ND	ND	ND	ND	
Methyl-tert-butyl ether (MTBE)	2.0	10.0	ND	ND	ND	ND	
Methylene chloride (DCM)	25	50	ND	ND	ND	ND	
Naphthalene	5.0	10.0	ND	ND	ND	ND	
n-Propylbenzene	5.0	10.0	ND	ND	ND	ND	
Styrene	5.0	10.0	ND	ND	ND	ND	
1,1,1,2-Tetrachloroethane	5.0	10.0	ND	ND	ND	ND	
1,1,2,2-Tetrachloroethane	5.0	10.0	ND	ND	ND	ND	
Tetrachloroethene	2.0	10.0	ND	ND	ND	45.0	
Toluene (Methyl benzene)	1.0	10.0	ND	ND	ND	ND	
1,2,3-Trichlorobenzene	5.0	10.0	ND	ND	ND	ND	
1,2,4-Trichlorobenzene	5.0	10.0	ND	ND	ND	ND	
1,1,1-Trichloroethane	5.0	10.0	ND	ND	ND	ND	
1,1,2-Trichloroethane	5.0	10.0	ND	ND	ND	ND	
Trichloroethene	1.5	10.0	ND	ND	ND	ND	
Trichlorofluoromethane	5.0	10.0	ND	ND	ND	ND	
1,2,3-Trichloropropane	1.0	5.0	ND	ND	ND	ND	

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ANALYTICAL RESULTS

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0430182A1

Our Lab I.D.			Method Blank	92472.01	92472.04	92472.07	
Client Sample I.D.				B1A-5	B1A-20	B2A-5	
Date Sampled				04/30/2018	04/30/2018	04/30/2018	
Date Prepared			04/30/2018	04/30/2018	04/30/2018	04/30/2018	
Preparation Method			5030	5035A	5035A	5035A	
Date Analyzed			04/30/2018	04/30/2018	04/30/2018	04/30/2018	
Matrix			Soil	Soil	Soil	Soil	
Units			ug/Kg	ug/Kg	ug/Kg	ug/Kg	
Dilution Factor			1	1	1	1	
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	
1,2,4-Trimethylbenzene	5.0	10.0	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	5.0	10.0	ND	ND	ND	ND	
Vinyl Acetate	25	50	ND	ND	ND	ND	
Vinyl chloride (Chloroethene)	5.0	10.0	ND	ND	ND	ND	
o-Xylene	1.0	10.0	ND	ND	ND	ND	
m,p-Xylenes	1.0	20.0	ND	ND	ND	ND	
Our Lab I.D.			Method Blank	92472.01	92472.04	92472.07	
Surrogates	**%Rec.Limit**		**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**	
Bromofluorobenzene	75-125		108	108	108	108	
Dibromofluoromethane	75-125		105	108	108	109	
Toluene-d8	75-125		104	106	107	109	

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ANALYTICAL RESULTS

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Site

10330-10384 Bellwood Ave.
Los Angeles, CA 90064

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Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0501182A1

Our Lab I.D.			Method Blank	92472.08			
Client Sample I.D.				B2A-10			
Date Sampled				04/30/2018			
Date Prepared			05/01/2018	05/01/2018			
Preparation Method			5030	5030			
Date Analyzed			05/01/2018	05/01/2018			
Matrix			Soil	Soil			
Units			ug/Kg	ug/Kg			
Dilution Factor			1	1			
Analytes	**MDL**	**PQL**	**Results**	**Results**			
Acetone	25	50	ND	ND			
Benzene	1.0	10.0	ND	ND			
Bromobenzene (Phenyl bromide)	5.0	10.0	ND	ND			
Bromochloromethane	5.0	10.0	ND	ND			
Bromodichloromethane	5.0	10.0	ND	ND			
Bromoform (Tribromomethane)	25	50	ND	ND			
Bromomethane (Methyl bromide)	15	30	ND	ND			
2-Butanone (MEK)	25	50	ND	ND			
n-Butylbenzene	5.0	10.0	ND	ND			
sec-Butylbenzene	5.0	10.0	ND	ND			
tert-Butylbenzene	5.0	10.0	ND	ND			
Carbon Disulfide	25	50	ND	ND			
Carbon tetrachloride	5.0	10.0	ND	ND			
Chlorobenzene	5.0	10.0	ND	ND			
Chloroethane	15	30	ND	ND			
2-Chloroethyl vinyl ether	50	50	ND	ND			
Chloroform (Trichloromethane)	5.0	10.0	ND	ND			
Chloromethane (Methyl chloride)	15	30	ND	ND			
2-Chlorotoluene	5.0	10.0	ND	ND			
4-Chlorotoluene	5.0	10.0	ND	ND			
1,2-Dibromo-3-chloropropane (DBCP)	5.0	10.0	ND	ND			
Dibromochloromethane	5.0	10.0	ND	ND			
1,2-Dibromoethane (EDB)	5.0	10.0	ND	ND			
Dibromomethane	5.0	10.0	ND	ND			
1,2-Dichlorobenzene	5.0	10.0	ND	ND			
1,3-Dichlorobenzene	5.0	10.0	ND	ND			
1,4-Dichlorobenzene	5.0	10.0	ND	ND			
Dichlorodifluoromethane	15	30	ND	ND			

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ANALYTICAL RESULTS

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0501182A1

Our Lab I.D.			Method Blank	92472.08			
Client Sample I.D.				B2A-10			
Date Sampled				04/30/2018			
Date Prepared			05/01/2018	05/01/2018			
Preparation Method			5030	5030			
Date Analyzed			05/01/2018	05/01/2018			
Matrix			Soil	Soil			
Units			ug/Kg	ug/Kg			
Dilution Factor			1	1			
Analytes	**MDL**	**PQL**	**Results**	**Results**			
1,1-Dichloroethane	5.0	10.0	ND	ND			
1,2-Dichloroethane (EDC)	5.0	10.0	ND	ND			
1,1-Dichloroethene	5.0	10.0	ND	ND			
cis-1,2-Dichloroethene	5.0	10.0	ND	ND			
trans-1,2-Dichloroethene	5.0	10.0	ND	ND			
1,2-Dichloropropane	5.0	10.0	ND	ND			
1,3-Dichloropropane	5.0	10.0	ND	ND			
2,2-Dichloropropane	5.0	10.0	ND	ND			
1,1-Dichloropropene	5.0	10.0	ND	ND			
cis-1,3-Dichloropropene	5.0	10.0	ND	ND			
trans-1,3-Dichloropropene	5.0	10.0	ND	ND			
Ethylbenzene	1.0	10.0	ND	ND			
Hexachlorobutadiene	15	30	ND	ND			
2-Hexanone	25	50	ND	ND			
Iodomethane	5.0	10.0	ND	ND			
Isopropylbenzene	5.0	10.0	ND	ND			
p-Isopropyltoluene	5.0	10.0	ND	ND			
4-Methyl-2-pentanone (MIBK)	25	50	ND	ND			
Methyl-tert-butyl ether (MTBE)	2.0	10.0	ND	ND			
Methylene chloride (DCM)	25	50	ND	ND			
Naphthalene	5.0	10.0	ND	ND			
n-Propylbenzene	5.0	10.0	ND	ND			
Styrene	5.0	10.0	ND	ND			
1,1,1,2-Tetrachloroethane	5.0	10.0	ND	ND			
1,1,2,2-Tetrachloroethane	5.0	10.0	ND	ND			
Tetrachloroethene	2.0	10.0	ND	ND			
Toluene (Methyl benzene)	1.0	10.0	ND	ND			
1,2,3-Trichlorobenzene	5.0	10.0	ND	ND			
1,2,4-Trichlorobenzene	5.0	10.0	ND	ND			
1,1,1-Trichloroethane	5.0	10.0	ND	ND			
1,1,2-Trichloroethane	5.0	10.0	ND	ND			
Trichloroethene	1.5	10.0	ND	ND			
Trichlorofluoromethane	5.0	10.0	ND	ND			
1,2,3-Trichloropropane	1.0	5.0	ND	ND			

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ANALYTICAL RESULTS

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0501182A1

Our Lab I.D.			Method Blank	**92472.08**			
Client Sample I.D.				B2A-10			
Date Sampled				04/30/2018			
Date Prepared			05/01/2018	05/01/2018			
Preparation Method			5030	5030			
Date Analyzed			05/01/2018	05/01/2018			
Matrix			Soil	Soil			
Units			ug/Kg	ug/Kg			
Dilution Factor			1	1			
Analytes	**MDL**	**PQL**	**Results**	**Results**			
1,2,4-Trimethylbenzene	5.0	10.0	ND	ND			
1,3,5-Trimethylbenzene	5.0	10.0	ND	ND			
Vinyl Acetate	25	50	ND	ND			
Vinyl chloride (Chloroethene)	5.0	10.0	ND	ND			
o-Xylene	1.0	10.0	ND	ND			
m,p-Xylenes	1.0	20.0	ND	ND			
Our Lab I.D.			Method Blank	**92472.08**			
Surrogates	**%Rec.Limit**		**% Rec.**	**% Rec.**			
Bromofluorobenzene	75-125		106	106			
Dibromofluoromethane	75-125		100	94.5			
Toluene-d8	75-125		102	105			

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ANALYTICAL RESULTS

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Site

10330-10384 Bellwood Ave.
Los Angeles, CA 90064

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0430182A1

Our Lab I.D.			92472.13	92472.15	92472.19	92472.21	92472.25
Client Sample I.D.			B3A-5	B3A-15	B4A-5	B4A-15	B5A-5
Date Sampled			04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Date Prepared			04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Preparation Method			5035A	5035A	5035A	5035A	5035A
Date Analyzed			04/30/2018	04/30/2018	05/01/2018	05/01/2018	05/01/2018
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Acetone	25	50	ND	ND	ND	ND	ND
Benzene	1.0	10.0	ND	ND	ND	ND	ND
Bromobenzene (Phenyl bromide)	5.0	10.0	ND	ND	ND	ND	ND
Bromochloromethane	5.0	10.0	ND	ND	ND	ND	ND
Bromodichloromethane	5.0	10.0	ND	ND	ND	ND	ND
Bromoform (Tribromomethane)	25	50	ND	ND	ND	ND	ND
Bromomethane (Methyl bromide)	15	30	ND	ND	ND	ND	ND
2-Butanone (MEK)	25	50	ND	ND	ND	ND	ND
n-Butylbenzene	5.0	10.0	ND	ND	ND	ND	ND
sec-Butylbenzene	5.0	10.0	ND	ND	ND	ND	ND
tert-Butylbenzene	5.0	10.0	ND	ND	ND	ND	ND
Carbon Disulfide	25	50	ND	ND	ND	ND	ND
Carbon tetrachloride	5.0	10.0	ND	ND	ND	ND	ND
Chlorobenzene	5.0	10.0	ND	ND	ND	ND	ND
Chloroethane	15	30	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	50	50	ND	ND	ND	ND	ND
Chloroform (Trichloromethane)	5.0	10.0	ND	ND	ND	ND	ND
Chloromethane (Methyl chloride)	15	30	ND	ND	ND	ND	ND
2-Chlorotoluene	5.0	10.0	ND	ND	ND	ND	ND
4-Chlorotoluene	5.0	10.0	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane (DBCP)	5.0	10.0	ND	ND	ND	ND	ND
Dibromochloromethane	5.0	10.0	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	5.0	10.0	ND	ND	ND	ND	ND
Dibromomethane	5.0	10.0	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5.0	10.0	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	5.0	10.0	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5.0	10.0	ND	ND	ND	ND	ND
Dichlorodifluoromethane	15	30	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0430182A1

Our Lab I.D.			92472.13	92472.15	92472.19	92472.21	92472.25
Client Sample I.D.			B3A-5	B3A-15	B4A-5	B4A-15	B5A-5
Date Sampled			04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Date Prepared			04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Preparation Method			5035A	5035A	5035A	5035A	5035A
Date Analyzed			04/30/2018	04/30/2018	05/01/2018	05/01/2018	05/01/2018
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
1,1-Dichloroethane	5.0	10.0	ND	ND	ND	ND	ND
1,2-Dichloroethane (EDC)	5.0	10.0	ND	ND	ND	ND	ND
1,1-Dichloroethene	5.0	10.0	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5.0	10.0	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5.0	10.0	ND	ND	ND	ND	ND
1,2-Dichloropropane	5.0	10.0	ND	ND	ND	ND	ND
1,3-Dichloropropane	5.0	10.0	ND	ND	ND	ND	ND
2,2-Dichloropropane	5.0	10.0	ND	ND	ND	ND	ND
1,1-Dichloropropene	5.0	10.0	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	5.0	10.0	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	5.0	10.0	ND	ND	ND	ND	ND
Ethylbenzene	1.0	10.0	ND	ND	ND	ND	ND
Hexachlorobutadiene	15	30	ND	ND	ND	ND	ND
2-Hexanone	25	50	ND	ND	ND	ND	ND
Iodomethane	5.0	10.0	ND	ND	ND	ND	ND
Isopropylbenzene	5.0	10.0	ND	ND	ND	ND	ND
p-Isopropyltoluene	5.0	10.0	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK)	25	50	ND	ND	ND	ND	ND
Methyl-tert-butyl ether (MTBE)	2.0	10.0	ND	ND	ND	ND	ND
Methylene chloride (DCM)	25	50	ND	ND	ND	ND	ND
Naphthalene	5.0	10.0	ND	ND	ND	ND	ND
n-Propylbenzene	5.0	10.0	ND	ND	ND	ND	ND
Styrene	5.0	10.0	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	5.0	10.0	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5.0	10.0	ND	ND	ND	ND	ND
Tetrachloroethene	2.0	10.0	ND	ND	ND	ND	ND
Toluene (Methyl benzene)	1.0	10.0	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	5.0	10.0	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5.0	10.0	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5.0	10.0	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	5.0	10.0	ND	ND	ND	ND	ND
Trichloroethene	1.5	10.0	ND	ND	ND	ND	ND
Trichlorofluoromethane	5.0	10.0	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	1.0	5.0	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0430182A1

Our Lab I.D.			92472.13	92472.15	92472.19	92472.21	92472.25
Client Sample I.D.			B3A-5	B3A-15	B4A-5	B4A-15	B5A-5
Date Sampled			04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Date Prepared			04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Preparation Method			5035A	5035A	5035A	5035A	5035A
Date Analyzed			04/30/2018	04/30/2018	05/01/2018	05/01/2018	05/01/2018
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
1,2,4-Trimethylbenzene	5.0	10.0	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5.0	10.0	ND	ND	ND	ND	ND
Vinyl Acetate	25	50	ND	ND	ND	ND	ND
Vinyl chloride (Chloroethene)	5.0	10.0	ND	ND	ND	ND	ND
o-Xylene	1.0	10.0	ND	ND	ND	ND	ND
m,p-Xylenes	1.0	20.0	ND	ND	ND	ND	ND
Our Lab I.D.			92472.13	92472.15	92472.19	92472.21	92472.25
Surrogates	**%Rec.Limit**		**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**
Bromofluorobenzene	75-125		109	109	106	106	110
Dibromofluoromethane	75-125		98.9	108	109	110	109
Toluene-d8	75-125		104	104	105	104	106

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Site

10330-10384 Bellwood Ave.
Los Angeles, CA 90064

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0501182A1

Our Lab I.D.			92472.26				
Client Sample I.D.			B5A-10				
Date Sampled			04/30/2018				
Date Prepared			05/01/2018				
Preparation Method			5030				
Date Analyzed			05/01/2018				
Matrix			Soil				
Units			ug/Kg				
Dilution Factor			1				
Analytes	**MDL**	**PQL**	**Results**				
Acetone	25	50	ND				
Benzene	1.0	10.0	ND				
Bromobenzene (Phenyl bromide)	5.0	10.0	ND				
Bromochloromethane	5.0	10.0	ND				
Bromodichloromethane	5.0	10.0	ND				
Bromoform (Tribromomethane)	25	50	ND				
Bromomethane (Methyl bromide)	15	30	ND				
2-Butanone (MEK)	25	50	ND				
n-Butylbenzene	5.0	10.0	ND				
sec-Butylbenzene	5.0	10.0	ND				
tert-Butylbenzene	5.0	10.0	ND				
Carbon Disulfide	25	50	ND				
Carbon tetrachloride	5.0	10.0	ND				
Chlorobenzene	5.0	10.0	ND				
Chloroethane	15	30	ND				
2-Chloroethyl vinyl ether	50	50	ND				
Chloroform (Trichloromethane)	5.0	10.0	ND				
Chloromethane (Methyl chloride)	15	30	ND				
2-Chlorotoluene	5.0	10.0	ND				
4-Chlorotoluene	5.0	10.0	ND				
1,2-Dibromo-3-chloropropane (DBCP)	5.0	10.0	ND				
Dibromochloromethane	5.0	10.0	ND				
1,2-Dibromoethane (EDB)	5.0	10.0	ND				
Dibromomethane	5.0	10.0	ND				
1,2-Dichlorobenzene	5.0	10.0	ND				
1,3-Dichlorobenzene	5.0	10.0	ND				
1,4-Dichlorobenzene	5.0	10.0	ND				
Dichlorodifluoromethane	15	30	ND				

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ANALYTICAL RESULTS

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0501182A1

Our Lab I.D.			92472.26				
Client Sample I.D.			B5A-10				
Date Sampled			04/30/2018				
Date Prepared			05/01/2018				
Preparation Method			5030				
Date Analyzed			05/01/2018				
Matrix			Soil				
Units			ug/Kg				
Dilution Factor			1				
Analytes	**MDL**	**PQL**	**Results**				
1,1-Dichloroethane	5.0	10.0	ND				
1,2-Dichloroethane (EDC)	5.0	10.0	ND				
1,1-Dichloroethene	5.0	10.0	ND				
cis-1,2-Dichloroethene	5.0	10.0	ND				
trans-1,2-Dichloroethene	5.0	10.0	ND				
1,2-Dichloropropane	5.0	10.0	ND				
1,3-Dichloropropane	5.0	10.0	ND				
2,2-Dichloropropane	5.0	10.0	ND				
1,1-Dichloropropene	5.0	10.0	ND				
cis-1,3-Dichloropropene	5.0	10.0	ND				
trans-1,3-Dichloropropene	5.0	10.0	ND				
Ethylbenzene	1.0	10.0	ND				
Hexachlorobutadiene	15	30	ND				
2-Hexanone	25	50	ND				
Iodomethane	5.0	10.0	ND				
Isopropylbenzene	5.0	10.0	ND				
p-Isopropyltoluene	5.0	10.0	ND				
4-Methyl-2-pentanone (MIBK)	25	50	ND				
Methyl-tert-butyl ether (MTBE)	2.0	10.0	ND				
Methylene chloride (DCM)	25	50	ND				
Naphthalene	5.0	10.0	ND				
n-Propylbenzene	5.0	10.0	ND				
Styrene	5.0	10.0	ND				
1,1,1,2-Tetrachloroethane	5.0	10.0	ND				
1,1,2,2-Tetrachloroethane	5.0	10.0	ND				
Tetrachloroethene	2.0	10.0	ND				
Toluene (Methyl benzene)	1.0	10.0	ND				
1,2,3-Trichlorobenzene	5.0	10.0	ND				
1,2,4-Trichlorobenzene	5.0	10.0	ND				
1,1,1-Trichloroethane	5.0	10.0	ND				
1,1,2-Trichloroethane	5.0	10.0	ND				
Trichloroethene	1.5	10.0	ND				
Trichlorofluoromethane	5.0	10.0	ND				
1,2,3-Trichloropropane	1.0	5.0	ND				

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ANALYTICAL RESULTS

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0501182A1

Our Lab I.D.			**92472.26**				
Client Sample I.D.			B5A-10				
Date Sampled			04/30/2018				
Date Prepared			05/01/2018				
Preparation Method			5030				
Date Analyzed			05/01/2018				
Matrix			Soil				
Units			ug/Kg				
Dilution Factor			1				
Analytes	**MDL**	**PQL**	**Results**				
1,2,4-Trimethylbenzene	5.0	10.0	ND				
1,3,5-Trimethylbenzene	5.0	10.0	ND				
Vinyl Acetate	25	50	ND				
Vinyl chloride (Chloroethene)	5.0	10.0	ND				
o-Xylene	1.0	10.0	ND				
m,p-Xylenes	1.0	20.0	ND				
Our Lab I.D.			**92472.26**				
Surrogates	**%Rec.Limit**		**% Rec.**				
Bromofluorobenzene	75-125		104				
Dibromofluoromethane	75-125		95.4				
Toluene-d8	75-125		104				

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Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0430182A1

Our Lab I.D.			92472.31	92472.34			
Client Sample I.D.			B6A-5	B6A-20			
Date Sampled			04/30/2018	04/30/2018			
Date Prepared			04/30/2018	04/30/2018			
Preparation Method			5035A	5035A			
Date Analyzed			05/01/2018	05/01/2018			
Matrix			Soil	Soil			
Units			ug/Kg	ug/Kg			
Dilution Factor			1	1			
Analytes	**MDL**	**PQL**	**Results**	**Results**			
Acetone	25	50	ND	ND			
Benzene	1.0	10.0	ND	ND			
Bromobenzene (Phenyl bromide)	5.0	10.0	ND	ND			
Bromochloromethane	5.0	10.0	ND	ND			
Bromodichloromethane	5.0	10.0	ND	ND			
Bromoform (Tribromomethane)	25	50	ND	ND			
Bromomethane (Methyl bromide)	15	30	ND	ND			
2-Butanone (MEK)	25	50	ND	ND			
n-Butylbenzene	5.0	10.0	ND	ND			
sec-Butylbenzene	5.0	10.0	ND	ND			
tert-Butylbenzene	5.0	10.0	ND	ND			
Carbon Disulfide	25	50	ND	ND			
Carbon tetrachloride	5.0	10.0	ND	ND			
Chlorobenzene	5.0	10.0	ND	ND			
Chloroethane	15	30	ND	ND			
2-Chloroethyl vinyl ether	50	50	ND	ND			
Chloroform (Trichloromethane)	5.0	10.0	ND	ND			
Chloromethane (Methyl chloride)	15	30	ND	ND			
2-Chlorotoluene	5.0	10.0	ND	ND			
4-Chlorotoluene	5.0	10.0	ND	ND			
1,2-Dibromo-3-chloropropane (DBCP)	5.0	10.0	ND	ND			
Dibromochloromethane	5.0	10.0	ND	ND			
1,2-Dibromoethane (EDB)	5.0	10.0	ND	ND			
Dibromomethane	5.0	10.0	ND	ND			
1,2-Dichlorobenzene	5.0	10.0	ND	ND			
1,3-Dichlorobenzene	5.0	10.0	ND	ND			
1,4-Dichlorobenzene	5.0	10.0	ND	ND			
Dichlorodifluoromethane	15	30	ND	ND			

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ANALYTICAL RESULTS

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0430182A1

Our Lab I.D.			92472.31	92472.34			
Client Sample I.D.			B6A-5	B6A-20			
Date Sampled			04/30/2018	04/30/2018			
Date Prepared			04/30/2018	04/30/2018			
Preparation Method			5035A	5035A			
Date Analyzed			05/01/2018	05/01/2018			
Matrix			Soil	Soil			
Units			ug/Kg	ug/Kg			
Dilution Factor			1	1			
Analytes	**MDL**	**PQL**	**Results**	**Results**			
1,1-Dichloroethane	5.0	10.0	ND	ND			
1,2-Dichloroethane (EDC)	5.0	10.0	ND	ND			
1,1-Dichloroethene	5.0	10.0	ND	ND			
cis-1,2-Dichloroethene	5.0	10.0	ND	ND			
trans-1,2-Dichloroethene	5.0	10.0	ND	ND			
1,2-Dichloropropane	5.0	10.0	ND	ND			
1,3-Dichloropropane	5.0	10.0	ND	ND			
2,2-Dichloropropane	5.0	10.0	ND	ND			
1,1-Dichloropropene	5.0	10.0	ND	ND			
cis-1,3-Dichloropropene	5.0	10.0	ND	ND			
trans-1,3-Dichloropropene	5.0	10.0	ND	ND			
Ethylbenzene	1.0	10.0	ND	ND			
Hexachlorobutadiene	15	30	ND	ND			
2-Hexanone	25	50	ND	ND			
Iodomethane	5.0	10.0	ND	ND			
Isopropylbenzene	5.0	10.0	ND	ND			
p-Isopropyltoluene	5.0	10.0	ND	ND			
4-Methyl-2-pentanone (MIBK)	25	50	ND	ND			
Methyl-tert-butyl ether (MTBE)	2.0	10.0	ND	ND			
Methylene chloride (DCM)	25	50	ND	ND			
Naphthalene	5.0	10.0	ND	ND			
n-Propylbenzene	5.0	10.0	ND	ND			
Styrene	5.0	10.0	ND	ND			
1,1,1,2-Tetrachloroethane	5.0	10.0	ND	ND			
1,1,2,2-Tetrachloroethane	5.0	10.0	ND	ND			
Tetrachloroethene	2.0	10.0	ND	ND			
Toluene (Methyl benzene)	1.0	10.0	ND	ND			
1,2,3-Trichlorobenzene	5.0	10.0	ND	ND			
1,2,4-Trichlorobenzene	5.0	10.0	ND	ND			
1,1,1-Trichloroethane	5.0	10.0	ND	ND			
1,1,2-Trichloroethane	5.0	10.0	ND	ND			
Trichloroethene	1.5	10.0	ND	ND			
Trichlorofluoromethane	5.0	10.0	ND	ND			
1,2,3-Trichloropropane	1.0	5.0	ND	ND			

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ANALYTICAL RESULTS

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0430182A1

Our Lab I.D.			**92472.31**	**92472.34**			
Client Sample I.D.			B6A-5	B6A-20			
Date Sampled			04/30/2018	04/30/2018			
Date Prepared			04/30/2018	04/30/2018			
Preparation Method			5035A	5035A			
Date Analyzed			05/01/2018	05/01/2018			
Matrix			Soil	Soil			
Units			ug/Kg	ug/Kg			
Dilution Factor			1	1			
Analytes	**MDL**	**PQL**	**Results**	**Results**			
1,2,4-Trimethylbenzene	5.0	10.0	ND	ND			
1,3,5-Trimethylbenzene	5.0	10.0	ND	ND			
Vinyl Acetate	25	50	ND	ND			
Vinyl chloride (Chloroethene)	5.0	10.0	ND	ND			
o-Xylene	1.0	10.0	ND	ND			
m,p-Xylenes	1.0	20.0	ND	ND			
Our Lab I.D.			**92472.31**	**92472.34**			
Surrogates	**%Rec.Limit**		**% Rec.**	**% Rec.**			
Bromofluorobenzene	75-125		104	104			
Dibromofluoromethane	75-125		107	106			
Toluene-d8	75-125		105	104			

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Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

Method: (M8015G), TPH as Gasoline and Light Hydrocarbons Using

QC Batch No: 043018OB1

Our Lab I.D.			Method Blank	**92472.01**	**92472.04**	**92472.07**	**92472.08**
Client Sample I.D.				B1A-5	B1A-20	B2A-5	B2A-10
Date Sampled				04/30/2018	04/30/2018	04/30/2018	04/30/2018
Date Prepared			04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Preparation Method			5030	5035A	5035A	5035A	5035A
Date Analyzed			04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
TPH as Gasoline and Light HC. (C4-C12)	0.100	1.000	ND	ND	ND	ND	ND
Our Lab I.D.			Method Blank	**92472.01**	**92472.04**	**92472.07**	**92472.08**
Surrogates	**%Rec.Limit**		**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**
Bromofluorobenzene	75-125		92.4	92.2	91.4	93.0	91.0

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Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

Method: (M8015G), TPH as Gasoline and Light Hydrocarbons Using

QC Batch No: 043018OB1

Our Lab I.D.			92472.13	92472.15	92472.19	92472.21	92472.25
Client Sample I.D.			B3A-5	B3A-15	B4A-5	B4A-15	B5A-5
Date Sampled			04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Date Prepared			04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Preparation Method			5035A	5035A	5035A	5035A	5035A
Date Analyzed			04/30/2018	04/30/2018	04/30/2018	05/01/2018	05/01/2018
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
TPH as Gasoline and Light HC. (C4-C12)	0.100	1.000	ND	ND	ND	ND	ND
Our Lab I.D.			92472.13	92472.15	92472.19	92472.21	92472.25
Surrogates	**%Rec.Limit**		**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**
Bromofluorobenzene	75-125		92.0	89.4	92.2	93.0	94.8

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Los Angeles, CA 90064

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Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

Method: (M8015G), TPH as Gasoline and Light Hydrocarbons Using

QC Batch No: 043018OB1

Our Lab I.D.			**92472.26**	**92472.31**	**92472.34**		
Client Sample I.D.			B5A-10	B6A-5	B6A-20		
Date Sampled			04/30/2018	04/30/2018	04/30/2018		
Date Prepared			04/30/2018	04/30/2018	04/30/2018		
Preparation Method			5035A	5035A	5035A		
Date Analyzed			05/01/2018	05/01/2018	05/01/2018		
Matrix			Soil	Soil	Soil		
Units			mg/Kg	mg/Kg	mg/Kg		
Dilution Factor			1	1	1		
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**		
TPH as Gasoline and Light HC. (C4-C12)	0.100	1.000	ND	ND	ND		
Our Lab I.D.			**92472.26**	**92472.31**	**92472.34**		
Surrogates	**%Rec.Limit**		**% Rec.**	**% Rec.**	**% Rec.**		
Bromofluorobenzene	75-125		96.6	92.6	90.6		

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Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

Method: (M8015D), TPH as Diesel and Heavy Hydrocarbons Using GC

QC Batch No: 050118PB1

Our Lab I.D.			Method Blank	**92472.01**	**92472.04**	**92472.07**	**92472.08**
Client Sample I.D.				B1A-5	B1A-20	B2A-5	B2A-10
Date Sampled				04/30/2018	04/30/2018	04/30/2018	04/30/2018
Date Prepared			05/01/2018	05/01/2018	05/01/2018	05/01/2018	05/01/2018
Preparation Method			3550B	3550B	3550B	3550B	3550B
Date Analyzed			05/01/2018	05/01/2018	05/01/2018	05/01/2018	05/01/2018
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
TPH as Diesel (C13-C22)	1.0	5.0	ND	ND	ND	ND	ND
TPH as Heavy Hydrocarbons (C23-C40)	1.0	5.0	ND	ND	ND	11.0	1.60J
TPH Total as Diesel and Heavy HC.C13-C40	1.0	5.0	ND	ND	ND	11.0	1.60J
Our Lab I.D.			Method Blank	**92472.01**	**92472.04**	**92472.07**	**92472.08**
Surrogates	**%Rec.Limit**		**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**
Chlorobenzene	75-125		97.7	98.9	103	100	98.2

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Site

10330-10384 Bellwood Ave.
Los Angeles, CA 90064

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Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

Method: (M8015D), TPH as Diesel and Heavy Hydrocarbons Using GC

QC Batch No: 050118PB1

Our Lab I.D.			92472.13	92472.15	92472.19	92472.21	92472.25
Client Sample I.D.			B3A-5	B3A-15	B4A-5	B4A-15	B5A-5
Date Sampled			04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Date Prepared			05/01/2018	05/01/2018	05/01/2018	05/01/2018	05/01/2018
Preparation Method			3550B	3550B	3550B	3550B	3550B
Date Analyzed			05/01/2018	05/01/2018	05/01/2018	05/01/2018	05/01/2018
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
TPH as Diesel (C13-C22)	1.0	5.0	ND	ND	ND	ND	ND
TPH as Heavy Hydrocarbons (C23-C40)	1.0	5.0	ND	ND	121	ND	ND
TPH Total as Diesel and Heavy HC.C13-C40	1.0	5.0	ND	ND	121	ND	ND
Our Lab I.D.			92472.13	92472.15	92472.19	92472.21	92472.25
Surrogates	**%Rec.Limit**		**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**
Chlorobenzene	75-125		98.8	99.8	100	99.2	105

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ANALYTICAL RESULTS

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Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

Method: (M8015D), TPH as Diesel and Heavy Hydrocarbons Using GC

QC Batch No: 050118PB1

Our Lab I.D.			**92472.26**	**92472.31**	**92472.34**		
Client Sample I.D.			B5A-10	B6A-5	B6A-20		
Date Sampled			04/30/2018	04/30/2018	04/30/2018		
Date Prepared			05/01/2018	05/01/2018	05/01/2018		
Preparation Method			3550B	3550B	3550B		
Date Analyzed			05/01/2018	05/01/2018	05/01/2018		
Matrix			Soil	Soil	Soil		
Units			mg/Kg	mg/Kg	mg/Kg		
Dilution Factor			1	1	1		
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**		
TPH as Diesel (C13-C22)	1.0	5.0	ND	ND	ND		
TPH as Heavy Hydrocarbons (C23-C40)	1.0	5.0	ND	ND	ND		
TPH Total as Diesel and Heavy HC.C13-C40	1.0	5.0	ND	ND	ND		
Our Lab I.D.			**92472.26**	**92472.31**	**92472.34**		
Surrogates	**%Rec.Limit**		**% Rec.**	**% Rec.**	**% Rec.**		
Chlorobenzene	75-125		103	100	99.3		

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QUALITY CONTROL RESULTS

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Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0430182A1; Dup or Spiked Sample: 92472.15; LCS: Clean Sand; QC Prepared: 04/30/2018;MS Analyzed: 05/01/2018; LCS Analyzed: 04/30/2018; Units: ug/Kg

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Benzene	0.00	50.0	37.8	75.6	50.0	38.1	76.2	<1	75-125	<20
Carbon tetrachloride	0.00	50.0	40.8	81.6	50.0	40.6	81.2	<1	75-125	<20
Chlorobenzene	0.00	50.0	45.5	91.0	50.0	46.9	93.8	3.0	75-125	<20
Chloroform (Trichloromethane)	0.00	50.0	39.4	78.8	50.0	39.1	78.2	<1	75-125	<20
1,2-Dichlorobenzene	0.00	50.0	49.5	99.0	50.0	51.0	102	3.0	75-125	<20
1,1-Dichloroethane	0.00	50.0	37.2 #	74.4	50.0	37.3 #	74.6	<1	75-125	<20
1,1-Dichloroethene	0.00	50.0	40.9	81.8	50.0	41.1	82.2	<1	75-125	<20
cis-1,2-Dichloroethene	0.00	50.0	39.7	79.4	50.0	40.5	81.0	2.0	75-125	<20
Ethylbenzene	0.00	50.0	45.1	90.2	50.0	46.2	92.4	2.4	75-125	<20
Methyl-tert-butyl ether (MTBE)	0.00	50.0	38.7	77.4	50.0	39.8	79.6	2.8	75-125	<20
n-Propylbenzene	0.00	50.0	48.2	96.4	50.0	49.4	98.8	2.5	75-125	<20
Toluene (Methyl benzene)	0.00	50.0	43.9	87.8	50.0	44.4	88.8	1.1	75-125	<20
1,1,1-Trichloroethane	0.00	50.0	40.7	81.4	50.0	41.7	83.4	2.4	75-125	<20
1,1,2-Trichloroethane	0.00	50.0	37.6	75.2	50.0	38.2	76.4	1.6	75-125	<20
Trichloroethene	0.00	50.0	43.6	87.2	50.0	43.9	87.8	<1	75-125	<20
1,2,4-Trimethylbenzene	0.00	50.0	48.6	97.2	50.0	50.5	101	3.8	75-125	<20
1,3,5-Trimethylbenzene	0.00	50.0	46.3	92.6	50.0	47.8	95.6	3.2	75-125	<20
o-Xylene	0.00	50.0	42.3	84.6	50.0	42.5	85.0	<1	75-125	<20
m,p-Xylenes	0.00	100	85.8	85.8	100	87.1	87.1	1.5	75-125	<20
Surrogates										
Bromofluorobenzene	0.00	50.0	52.5	105	50.0	52.5	105	<1	75-125	<20
Dibromofluoromethane	0.00	50.0	42.6	85.2	50.0	45.4	90.7	6.3	75-125	<20
Toluene-d8	0.00	50.0	49.0	98.0	50.0	48.8	97.6	<1	75-125	<20

QC Batch No: 0430182A1; Dup or Spiked Sample: 92472.15; LCS: Clean Sand; QC Prepared: 04/30/2018;MS Analyzed: 05/01/2018; LCS Analyzed: 04/30/2018; Units: ug/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS DUP Concen	LCS DUP Recov	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit	
Benzene	50.0	45.9	91.8	50.0	44.0	88.0	4.2	75-125	<20	
Carbon tetrachloride	50.0	48.8	97.6	50.0	47.5	95.0	2.7	75-125	<20	
Chlorobenzene	50.0	56.0	112	50.0	54.0	108	3.6	75-125	<20	
Chloroform (Trichloromethane)	50.0	42.0	84.0	50.0	43.5	87.0	3.5	75-125	<20	

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QUALITY CONTROL RESULTS

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0430182A1; Dup or Spiked Sample: 92472.15; LCS: Clean Sand; QC Prepared: 04/30/2018;MS Analyzed: 05/01/2018; LCS Analyzed: 04/30/2018; Units: ug/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS DUP Concen	LCS DUP Recov	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit	
1,2-Dichlorobenzene	50.0	62.5	125	50.0	60.5	121	3.3	75-125	<20	
1,1-Dichloroethane	50.0	41.9	83.8	50.0	45.5	91.0	8.2	75-125	<20	
1,1-Dichloroethene	50.0	46.9	93.8	50.0	47.5	95.0	1.3	75-125	<20	
cis-1,2-Dichloroethene	50.0	46.0	92.0	50.0	45.5	91.0	1.1	75-125	<20	
Ethylbenzene	50.0	56.0	112	50.0	53.5	107	4.6	75-125	<20	
Methyl-tert-butyl ether (MTBE)	50.0	48.8	97.6	50.0	47.5	95.0	2.7	75-125	<20	
n-Propylbenzene	50.0	60.0	120	50.0	58.0	116	3.4	75-125	<20	
Toluene (Methyl benzene)	50.0	53.0	106	50.0	52.0	104	1.9	75-125	<20	
1,1,1-Trichloroethane	50.0	48.8	97.6	50.0	47.5	95.0	2.7	75-125	<20	
1,1,2-Trichloroethane	50.0	50.0	100	50.0	47.5	95.0	5.1	75-125	<20	
Trichloroethene	50.0	48.6	97.2	50.0	46.5	93.0	4.4	75-125	<20	
1,2,4-Trimethylbenzene	50.0	60.5	121	50.0	57.5	115	5.1	75-125	<20	
1,3,5-Trimethylbenzene	50.0	56.5	113	50.0	54.5	109	3.6	75-125	<20	
o-Xylene	50.0	52.0	104	50.0	49.0	98.0	5.9	75-125	<20	
m,p-Xylenes	100	106	106	100	102	102	3.8	75-125	<20	
Surrogates										
Bromofluorobenzene	50.0	53.5	107	50.0	52.5	105	1.9	75-125	<20	
Dibromofluoromethane	50.0	45.1	90.1	50.0	44.4	88.7	1.6	75-125	<20	
Toluene-d8	50.0	50.0	99.9	50.0	49.5	99.0	<1	75-125	<20	

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QUALITY CONTROL RESULTS

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Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0501182A1; Dup or Spiked Sample: B0501182A1; LCS: Clean Sand; QC Prepared: 05/01/2018; QC Analyzed: 05/01/2018; Units: ug/Kg

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Benzene	0.00	50.0	40.4	80.8	50.0	44.4	88.8	9.4	75-125	<20
Carbon tetrachloride	0.00	50.0	39.4	78.8	50.0	48.1	96.2	19.9	75-125	<20
Chlorobenzene	0.00	50.0	49.9	99.8	50.0	55.0	110	9.7	75-125	<20
Chloroform (Trichloromethane)	0.00	50.0	38.8	77.6	50.0	42.9	85.8	10.0	75-125	<20
1,2-Dichlorobenzene	0.00	50.0	56.5	113	50.0	58.5	117	3.5	75-125	<20
1,1-Dichloroethane	0.00	50.0	39.6	79.2	50.0	40.1	80.2	1.3	75-125	<20
1,1-Dichloroethene	0.00	50.0	41.6	83.2	50.0	46.8	93.6	11.8	75-125	<20
cis-1,2-Dichloroethene	0.00	50.0	40.6	81.2	50.0	43.6	87.2	7.1	75-125	<20
Ethylbenzene	0.00	50.0	47.6	95.2	50.0	55.0	110	14.4	75-125	<20
Methyl-tert-butyl ether (MTBE)	0.00	50.0	45.4	90.8	50.0	45.6	91.2	<1	75-125	<20
n-Propylbenzene	0.00	50.0	50.5	101	50.0	58.0	116	13.8	75-125	<20
Toluene (Methyl benzene)	0.00	50.0	46.6	93.2	50.0	54.0	108	14.7	75-125	<20
1,1,1-Trichloroethane	0.00	50.0	40.9	81.8	50.0	48.8	97.6	17.6	75-125	<20
1,1,2-Trichloroethane	0.00	50.0	47.5	95.0	50.0	47.0	94.0	1.1	75-125	<20
Trichloroethene	0.00	50.0	41.3	82.6	50.0	48.0	96.0	15.0	75-125	<20
1,2,4-Trimethylbenzene	0.00	50.0	51.0	102	50.0	58.0	116	12.8	75-125	<20
1,3,5-Trimethylbenzene	0.00	50.0	47.6	95.2	50.0	55.0	110	14.4	75-125	<20
o-Xylene	0.00	50.0	45.3	90.6	50.0	50.5	101	10.9	75-125	<20
m,p-Xylenes	0.00	100	89.6	89.6	100	103	103	13.9	75-125	<20
Surrogates										
Bromofluorobenzene	0.00	50.0	52.0	104	50.0	54.5	109	4.7	75-125	<20
Dibromofluoromethane	0.00	50.0	41.1	82.1	50.0	42.4	84.8	3.2	75-125	<20
Toluene-d8	0.00	50.0	47.9	95.7	50.0	49.6	99.1	3.5	75-125	<20

QC Batch No: 0501182A1; Dup or Spiked Sample: B0501182A1; LCS: Clean Sand; QC Prepared: 05/01/2018; QC Analyzed: 05/01/2018; Units: ug/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS DUP Concen	LCS DUP Recov	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit	
Benzene	50.0	42.2	84.4	50.0	43.0	86.0	1.9	75-125	<20	
Carbon tetrachloride	50.0	44.0	88.0	50.0	45.0	90.0	2.2	75-125	<20	
Chlorobenzene	50.0	52.5	105	50.0	52.5	105	<1	75-125	<20	
Chloroform (Trichloromethane)	50.0	42.4	84.8	50.0	44.0	88.0	3.7	75-125	<20	

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QUALITY CONTROL RESULTS

Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

QC Batch No: 0501182A1; Dup or Spiked Sample: B0501182A1; LCS: Clean Sand; QC Prepared: 05/01/2018; QC Analyzed: 05/01/2018; Units: ug/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS DUP Concen	LCS DUP Recov	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit	
1,2-Dichlorobenzene	50.0	58.0	116	50.0	58.0	116	<1	75-125	<20	
1,1-Dichloroethane	50.0	38.9	77.8	50.0	37.5	75.0	3.7	75-125	<20	
1,1-Dichloroethene	50.0	42.3	84.6	50.0	41.5	83.0	1.9	75-125	<20	
cis-1,2-Dichloroethene	50.0	41.8	83.6	50.0	44.0	88.0	5.1	75-125	<20	
Ethylbenzene	50.0	50.5	101	50.0	51.0	102	<1	75-125	<20	
Methyl-tert-butyl ether (MTBE)	50.0	46.5	93.0	50.0	44.0	88.0	5.5	75-125	<20	
n-Propylbenzene	50.0	54.0	108	50.0	55.0	110	1.8	75-125	<20	
Toluene (Methyl benzene)	50.0	48.6	97.2	50.0	49.5	99.0	1.8	75-125	<20	
1,1,1-Trichloroethane	50.0	44.3	88.6	50.0	45.5	91.0	2.7	75-125	<20	
1,1,2-Trichloroethane	50.0	46.3	92.6	50.0	47.0	94.0	1.5	75-125	<20	
Trichloroethene	50.0	44.3	88.6	50.0	44.5	89.0	<1	75-125	<20	
1,2,4-Trimethylbenzene	50.0	56.0	112	50.0	56.0	112	<1	75-125	<20	
1,3,5-Trimethylbenzene	50.0	52.5	105	50.0	53.5	107	1.9	75-125	<20	
o-Xylene	50.0	47.5	95.0	50.0	47.5	95.0	<1	75-125	<20	
m,p-Xylenes	100	96.1	96.1	100	95.8	95.8	<1	75-125	<20	
Surrogates										
Bromofluorobenzene	50.0	53.5	107	50.0	54.0	108	<1	75-125	<20	
Dibromofluoromethane	50.0	44.0	88.0	50.0	44.9	89.8	2.0	75-125	<20	
Toluene-d8	50.0	48.1	96.1	50.0	48.4	96.7	<1	75-125	<20	

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QUALITY CONTROL RESULTS

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Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

Method: (M8015D), TPH as Diesel and Heavy Hydrocarbons Using GC

QC Batch No: 050118PB1; Dup or Spiked Sample: 92472.34; LCS: Clean Sand; QC Prepared: 05/01/2018; QC Analyzed: 05/01/2018; Units: mg/Kg

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
TPH as Diesel (C13-C22)	0.00	500	505	101	500	500	100	<1	75-125	<20
Surrogates										
Chlorobenzene	0.00	100	97.8	97.8	100	97.9	97.9	<1	75-125	<20

QC Batch No: 050118PB1; Dup or Spiked Sample: 92472.34; LCS: Clean Sand; QC Prepared: 05/01/2018; QC Analyzed: 05/01/2018; Units: mg/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS DUP Concen	LCS DUP Recov	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit	
TPH as Diesel (C13-C22)	500	487	97.4	500	505	101	3.6	75-125	<20	
Surrogates										
Chlorobenzene	100	94.9	94.9	100	94.9	94.9	<1	75-125	<20	

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QUALITY CONTROL RESULTS

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Project ID: 18-41-139-01
Project Name: 10330-10384 Bellwood Ave.

AETL Job Number	Submitted	Client
92472	04/30/2018	CONVRS

Method: (M8015G), TPH as Gasoline and Light Hydrocarbons Using

QC Batch No: 043018OB1; Dup or Spiked Sample: 92472.15AGA; LCS: Clean Sand; QC Prepared: 04/30/2018;MS Analyzed: 05/01/2018; LCS Analyzed: 04/30/2018; Units: mg/Kg

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
TPH as Gasoline and Light HC. (C4-C12)	0.00	1.00	0.788	78.8	1.00	0.833	83.3	5.6	75-125	<20
Surrogates										
Bromofluorobenzene	0.00	0.0500	0.0459	91.8	0.0500	0.0442	88.4	3.8	75-125	<20

QC Batch No: 043018OB1; Dup or Spiked Sample: 92472.15AGA; LCS: Clean Sand; QC Prepared: 04/30/2018;MS Analyzed: 05/01/2018; LCS Analyzed: 04/30/2018; Units: mg/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS DUP Concen	LCS DUP Recov	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit	
TPH as Gasoline and Light HC. (C4-C12)	1.00	0.836	83.6	1.00	0.822	82.2	1.7	75-125	<20	
Surrogates										
Bromofluorobenzene	0.0500	0.0451	90.2	0.0500	0.0434	86.8	3.8	75-125	<20	

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2834 & 2908 North Naomi Street, Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

Data Qualifier:

#:	Recovery is not within acceptable control limits.
*:	In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
B:	Analyte was present in the Method Blank.
D:	Result is from a diluted analysis.
E:	Result is beyond calibration limits and is estimated.
H:	Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
J:	Analyte was detected . However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
M:	Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
MCL:	Maximum Contaminant Level
NS:	No Standard Available
S6:	Surrogate recovery is outside control limits due to matrix interference.
S8:	The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
X:	Results represent LCS and LCSD data.

Definition:

%Limi:	Percent acceptable limits.
%REC:	Percent recovery.
Con.L:	Acceptable Control Limits
Conce:	Added concentration to the sample.
LCS:	Laboratory Control Sample
MDL:	Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.

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Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference

Appendix IS-6

Hydrology and Water Quality Technical Memorandum

Hydrology and Water Quality Technical Memorandum

Senior Residential Community at The Bellwood

10328-10384, 10341-10381 Bellwood Avenue
Los Angeles, California 90064

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Date Prepared: May 2019

Job Number: 1755.001

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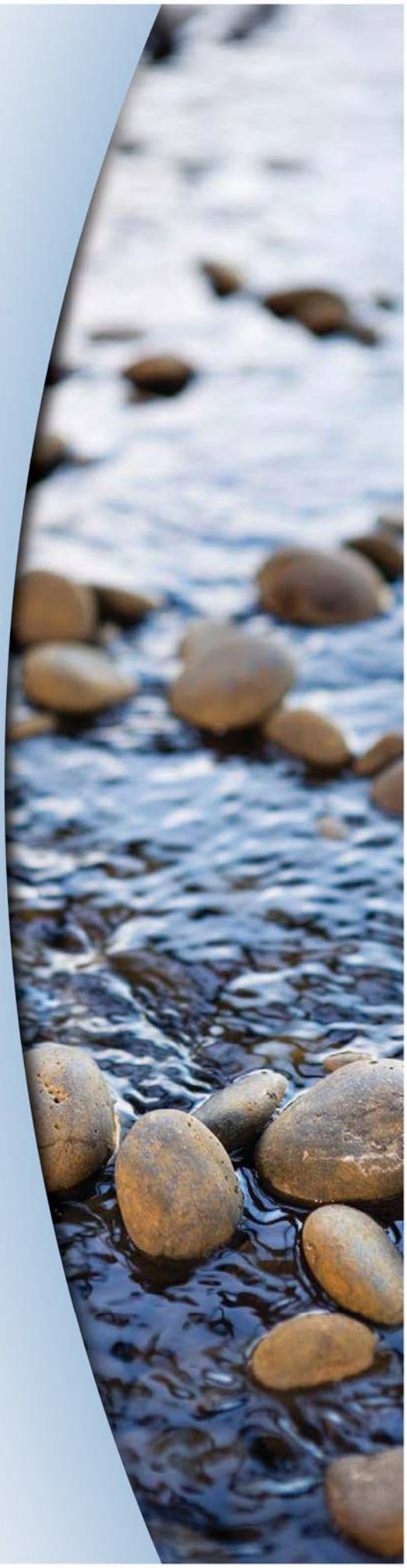

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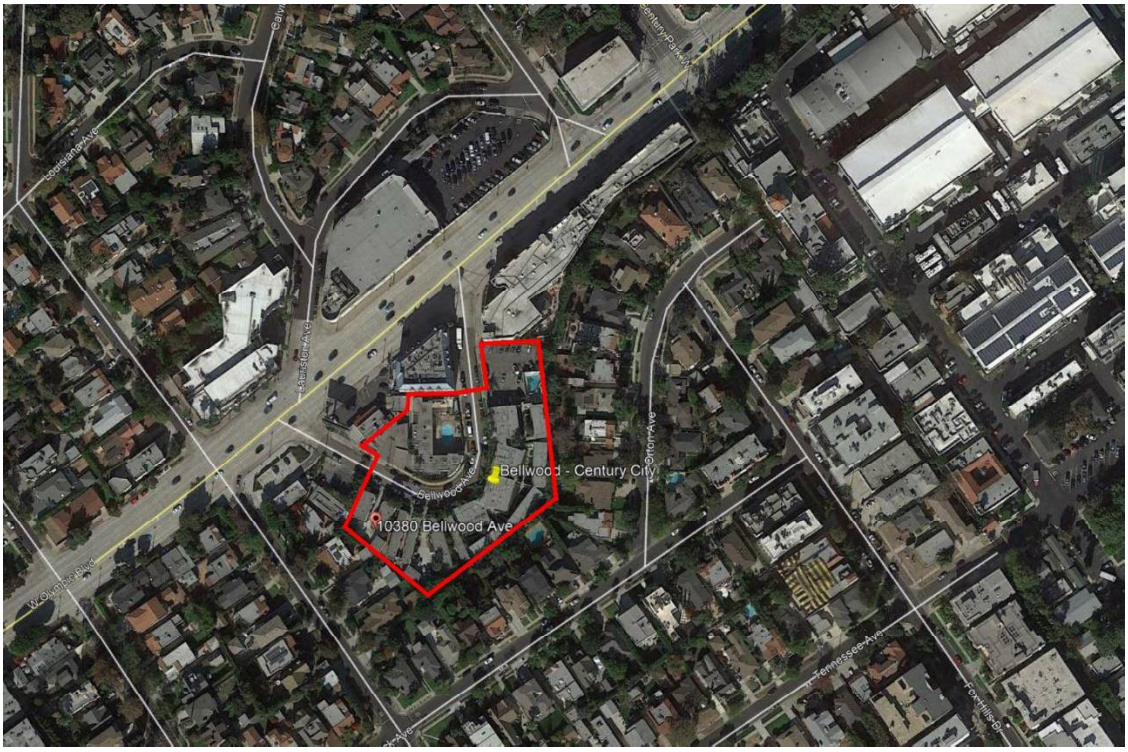
ATTACHMENT E – HydroCalc Hydrology Results for Proposed Site

1. INTRODUCTION

1.1. PROJECT DESCRIPTION

SBLP Century City, LLC (Applicant) is proposing to develop a new eldercare facility for persons 62 years of age and older (Project) on an approximately 2.22-acre site located at 10328-10384 and 10341-10381 Bellwood Avenue (Project Site) in the City of Los Angeles (City). The Project Site includes the portion of Bellwood Avenue that bifurcates the Project Site and is proposed to be realigned through the Project Site. The Project would include 192 senior housing residential units, comprised of 71 senior independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms in a single building ranging in height from three to six stories. The Project would comprise 241,754 square feet of floor area. Three existing multi-family residential developments with a total of 112 residential units and associated parking areas would be removed to accommodate the Project.

The Project Site is bounded by commercial structures adjacent to Olympic Boulevard to the north and northwest, and by residential uses to the west, south and east.



1.2. SCOPE OF WORK

This report describes the existing and proposed surface water hydrology and surface water quality at the Project Site and immediate surrounding areas.

2. ENVIRONMENTAL SETTING

2.1. SURFACE WATER HYDROLOGY

2.1.1. Regional

The Project Site is located within the Ballona Creek Watershed, which covers approximately 130 square miles. The watershed includes the cities of Beverly Hills, West Hollywood, portions of the cities of Los Angeles, Culver City, Inglewood and Santa Monica, unincorporated areas of Los Angeles County, and areas under the jurisdiction of Caltrans. Ballona Creek flows as an open channel for just under 10 miles from mid-Los Angeles (south of Hancock Park) through Culver City, reaching the Pacific Ocean at Playa del Rey (Marina del Rey Harbor). Ballona Creek watershed is highly developed with 49% of the watershed covered by impervious surfaces.

Major tributaries of Ballona Creek include Centinela Creek, Sepulveda Channel and Benedict Canyon Channel. The Project falls within the Sepulveda Channel sub-watershed.

Please refer to Attachment A for a map of the Ballona Creek Watershed.

2.1.2. Local

Stormwater runoff is collected by storm drain facilities along Bellwood Avenue. The storm drain facilities along Bellwood Avenue tie into an adjacent 63-inch storm drain main line to the northwest, along Olympic Boulevard. These storm drain facilities are owned and maintained by the City of Los Angeles. The mainline flows in a southwesterly direction and discharges into the Sepulveda Channel.

All of the stormwater runoff from the Project Site, which is within the Sepulveda Channel sub-watershed as discussed above, is discharged into Ballona Creek, Reach 2 and ultimately into the Pacific Ocean. Reach 2 is approximately four miles long and spans the area between National Boulevard and Centinela Avenue where Ballona Estuary starts. It includes the Los Angeles neighborhoods of Culver City and Beverly Hills along with portions of other cities of Los Angeles County.

2.1.3. On Site

The existing Project Site consists of one and two story apartment complexes and associated parking areas and community pools. Stormwater runoff from the Project Site is collected and conveyed onto Bellwood Avenue. Flows then travel to the northwest via surface flow on Bellwood Avenue, where they are captured by one of two catch basins located on the corner of Bellwood Avenue and Olympic Boulevard. These two catch basins then flow westerly into the 63-inch storm drain main line that runs parallel to Olympic Boulevard.

Please refer to Attachment B for the existing drainage pattern and existing hydrology of the Project Site.

Table 1 below provides the 25-year and 50-year storm frequency analysis for the Project Site's existing conditions. Output calculations are provided in Attachment C.

Table 1 Existing Drainage Conditions

Drainage Area	Area (acres)	% Impervious	Q25 (cfs)	Q50 (cfs)
A-1	0.37	95	1.05	1.20
A-2	1.40	74	3.39	4.15
B-1	0.18	84	0.51	0.58
B-2	0.21	83	0.55	0.68
C-1	0.02	100	0.06	0.07
C-2	0.04	100	0.11	0.13
Existing Total	2.22	89	5.67	6.80

Under existing conditions, the Project Site discharges to Bellwood Avenue. The total amount of runoff produced from the Project Site during a 25-year storm event is 5.67 cubic feet per second (cfs). For a 50-year event, the total project runoff is 6.80 cfs. Runoff from the Project Site is captured by two catch basins located adjacent to the intersection of Bellwood Avenue and Olympic Boulevard. There are no known existing storm drain deficiencies or capacity issues within the storm drains that collect runoff from the Project Site.

2.2. SURFACE WATER QUALITY

2.2.1. Regional

As described above, the Project is located within the Sepulveda Channel sub-watershed of the Ballona Creek watershed. This sub-watershed drains directly into Reach 2 of the Ballona Creek. Ballona Creek Reach 2 is an impaired portion of the Ballona Creek and primarily includes the Los Angeles neighborhoods of Beverly Hills, Culver City, and other portions of other cities of Los Angeles County. Ballona Creek consists of a concrete channel, with the water generally restricted to a central low-flow channel.

2.2.1.1. Impairments and TMDLs in Ballona Creek Reach 2/Ballona Creek Watershed

Clean Water Act 303(d) List of Water Quality Limited Segments

Under Section 303(d) of the Clean Water Act (CWA), states are required to identify water bodies that do not meet their water quality standards. Biennially, the Los Angeles Regional Water Quality Control Board (LARWQCB) prepares a list of impaired waterbodies in the region, referred to as the 303(d) list. The 303(d) list outlines the impaired waterbody and the specific pollutant(s) for which it is impaired. Table 2 lists the existing 303(d) impairments in water bodies that ultimately receive flows from the Project Site.

Table 2 303(d) Impairments

Water Body	303(d) Impairment
Ballona Creek	Copper, Cyanide, Indicator Bacteria, Lead, Toxicity, Trash, Viruses, Zinc
Ballona Creek Estuary	Cadmium, Chlordane, Copper, DDT, Indicator Bacteria, Lead, PAHs, PCBs, Toxicity, Zinc
Santa Monica Bay Offshore/Nearshore	Arsenic, DDT, Mercury, PCBs, Trash
Notes: Source: 2014 - 2016 Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report) – Statewide, found here: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml	

Total Maximum Daily Loads (TMDLs)

Once a water body has been listed as impaired on the 303(d) list, a TMDL for the constituent of concern (pollutant) must be developed for that water body. A TMDL is an estimate of the daily load of pollutants that a water body may receive from point sources, non-point sources, and natural background conditions (including an appropriate margin of safety), without exceeding its water quality standard. Those facilities and activities that are discharging into the water body, collectively, must not exceed the TMDL. In general terms, municipal separate stormwater systems (MS4), and other dischargers within each watershed are collectively responsible for meeting the required reductions and other TMDL requirements by the assigned deadline. TMDLs for water bodies that ultimately receive flows from the Project Site are listed in Table 3 below.

Table 3 Total Maximum Daily Loads

Water Body	TMDLs In Effect
Ballona Creek	Copper, Indicator Bacteria, Lead, Selenium, Toxicity, Trash, Viruses, Zinc
Ballona Creek Estuary	Cadmium, Chlordane, Copper, DDT, Indicator Bacteria, Lead, PAHs, PCBs, Toxicity, Zinc
Santa Monica Bay Offshore/Nearshore	DDT, PCBs, Trash
Notes: Source: 2014 - 2016 Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report) – Statewide, found here: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml	

Ballona Creek Watershed Enhanced Watershed Management Program

The County of Los Angeles, the City of Los Angeles and all other cities in the Los Angeles Watershed are responsible for the implementation of watershed improvement plans or Enhanced Watershed Management Programs (EWMP) to improve water quality and assist in meeting the Total Maximum Daily Load (TMDL) milestones. A draft EWMP for the Ballona Creek Watershed (BC EWMP, July 2015), prepared with the City of Los Angeles as the lead coordinating agency, is in the process of review by the LARWQCB. The objective of the EWMP Plan is to determine the network of control measures (often referred to as best management practices [BMPs]) that will achieve required pollutant reductions while also providing multiple benefits to the community and leveraging sustainable green infrastructure practices (BC EWMP, July 2015).

The draft BC EWMP identifies a toolbox of distributed and regional watershed control measures to address applicable stormwater quality regulations including the following:

- Low Impact Development (LID) at individual parcels
- Green Streets features within the public right-of-way and privately maintained streets
- Regional projects that retain and treat runoff from large upstream areas
- Institutional control measures to prevent transport of pollutants in the watershed

The Project Site, located in the Sepulveda Channel Sub-watershed, falls within the BC EWMP and ultimately discharges into Reach 2 of Ballona Creek. The draft BC EWMP does not identify any regional BMP projects in the vicinity of the Project.

2.2.2. Local

Within the urban environment of the Project, stormwater runoff occurs during and shortly after rain events. The volume of runoff depends on the intensity and duration of the storm event and the imperviousness of the drainage area. Typical urban pollutants associated with stormwater runoff following rain events includes sediment, trash, bacteria, metals, nutrients, and potentially organics and pesticides. The source of contaminants is wide ranging and includes all areas where rainfall occurs along with atmospheric deposition. Therefore, sources of contaminants within urban areas include roadways, building tops, parking lots, landscape areas and maintenance areas.

To reduce contaminant loads from entering the storm drain system, the City conducts routine street cleaning operations as well as periodic cleaning and maintenance of the catch basins to reduce stormwater pollution within the storm drain system. The City also installs catch basin screens to reduce trash from entering the catch basins.

2.2.3. On Site

Under existing conditions, the Project Site is mostly residential, with associated parking areas. Based on visual inspection, water quality treatment control BMPs are not currently present at the Project Site. Stormwater that leaves the Project Site is untreated and flows into curbside inlets on the west into the public right-of-way where it ultimately gets picked up by the public storm drain system. Anticipated pollutants consistent with parking lots, building areas and landscaping include total suspended solids (TSS), oil/grease, heavy metals, nutrients, pesticides and trash.

3. METHODOLOGY

3.1. SURFACE WATER HYDROLOGY

On December 3, 1999, the City of Los Angeles issued Special Order No. 007-1299 which adopted the Los Angeles County Department of Public Works' Hydrology Manual to be used for hydrology studies within the City of Los Angeles. According to the County's Hydrology Manual, the Project is required to have drainage facilities that meet the Urban Flood level of protection, which is equivalent to runoff from a 25-year frequency design storm falling on a saturated watershed. A 25-year frequency design storm has a probability of 1/25 of being equaled or exceeded in any year.

However, per the *L.A. CEQA Thresholds Guide*, a 50-year storm frequency analysis is required when determining flood hazards impacts and changes in the amount or movement of surface water. Therefore, runoff for both 25- and 50-year frequency design storms was calculated for this report.

This study was prepared using HydroCalc 1.0.2 software in conformance with the County's Hydrology Manual (2006). The HydroCalc program uses the Modified Rational Method to calculate the required time of concentration and designed flowrates for 25- and 50-year storm events. The peak runoff for a drainage area is calculated using the formula Q= CIA, where

- Q = flowrate (cfs)
- C= runoff coefficient (unit less)
- I=rainfall intensity (in/hr)
- A= basin area (acres)

The HydroCalc calculator is supported by the County's online GIS system. This database is used to locate the Project Site's 50-year isohyet rainfall frequency as well as relevant soil type. The data collected is then used in the HydroCalc program to calculate peak stormwater runoff values.

3.2. SURFACE WATER QUALITY

3.2.1. Construction

As Project construction would disturb more than one acre of land, the Project would be required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) stormwater permitting program, which is administered by the State Water Resources Control Board through its nine regional boards, including the LARWQCB. The NPDES Construction General Permit (Order No 2012-0006-DWQ) requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) to document the selection and implementation of Best Management Practices (BMPs) during construction to reduce or prevent the discharge of pollutants from construction activities.

3.2.2. Operation

Low Impact Development (LID) is a stormwater strategy that is used to mitigate the impacts of runoff and stormwater pollution as close to its source as possible. Urban runoff discharged from municipal storm drain systems is one of the principal causes of water quality impacts in most urban areas. The stormwater may contain pollutants such as trash and debris, bacteria and viruses, oil and grease, sediments, nutrients, metals, and toxic chemicals that can negatively affect the ocean, rivers, plant and animal life, and public health.

LID encompasses a set of site design approaches and BMPs that are designed to address runoff and pollution at the source. These LID practices can effectively remove nutrients, bacteria, and metals, while reducing the volume and intensity of stormwater flows.

In accordance with LARWQCB Order No. R4-2012-0175, stormwater runoff shall be infiltrated, evapotranspired, captured and used, or treated through high removal efficiency BMPs, onsite, through stormwater management techniques that comply with provisions of the City of Los Angeles Planning and Land Development Handbook for Low Impact Development (May 2016) (LID Manual).

The City of Los Angeles also passed a LID Ordinance (#181899) on October 7, 2011 which provides mandates for LID BMPs within development and redevelopment projects.

The LARWQCB has a BMP hierarchy for projects to follow when selecting the type or types of BMPs to be constructed on site, per Order No. R4-2012-0175 as amended by Order WQ 2015-0075 NPDES NO. CAS004001:

1. On-site infiltration,
2. On-site bioretention and/or harvest and use,
3. On-site biofiltration, off-site ground water replenishment, and/or off-site retrofit

The Project will also comply with the City's LID Manual,[1] which requires that post-construction stormwater runoff from new developments be infiltrated, evapotranspired, captured and reused, and/or treated through a high efficiency BMP onsite for the 85th percentile storm event or 0.75"—whichever is greater.

The LID Manual states that BMPs shall be designed to manage and capture stormwater runoff. Consistent with the LARWQCB's BMP hierarchy, infiltration systems are the first priority type of BMP improvements as they provide for percolation and infiltration of the stormwater into the ground, which not only reduces the volume of stormwater runoff entering the stormwater system but also contributes to groundwater recharge in some areas. The second priority BMP is capturing and reusing stormwater onsite for either landscape irrigation or toilet flushing. Projects that cannot infiltrate or harvest/reuse the water quality volume may implement biofiltration BMPs. Biofiltration BMPs shall be sized to adequately capture 1.5 times the volume not managed through infiltration and/or capture and reuse.

4. PROJECT ANALYSIS

4.1. CONSTRUCTION

4.1.1. Surface Water Hydrology and Quality

Implementation of the Project would result in construction activities that include demolition of the existing buildings and parking areas on-site, excavation of existing soils, and the export of soil from the Project Site. Construction activities have the potential to temporarily alter the existing drainage patterns of the Project Site and also increase the permeability of the site based on increased pervious surface coverage during construction. Exposed pervious surfaces also have the potential for erosion, scour, and increased sediment and associated pollutants discharging from the Project Site during construction activities. The main pollutant of concern during construction is typically sediment and soil particles that discharge off-site due to wind, rain, and construction patterns. In the event exceedances of receiving water quality objectives are observed, measures must be taken and documented within the SWPPP to improve discharge water quality and runoff effluent. This may include but not be limited to increasing the size of existing BMPs, adding more BMPs to the drainage area, additional filtering, and/or a reduction in active grading area.

Construction Best Management Practices (BMPs)

Prior to commencement of construction activities, the General Permit requires the Project SWPPP to be prepared in accordance with the site-specific information including grading limits, BMPs for each phase, schedule and sediment risk analyses. In accordance with the General Permit, the construction SWPPP must describe construction BMPs that address pollutant source reduction, and provide measures/controls necessary to mitigate potential pollutant sources. These measures/controls include, but are not limited to: erosion controls, sediment controls, tracking controls, non-storm water management, materials & waste management, and good housekeeping practices including the following types of BMPs:

- Erosion control BMPs, such as hydraulic mulch, soil binders, and geotextiles and mats, protect the soil surface by covering and/or binding the soil particles. Temporary earth dikes or drainage swales may also be employed to divert runoff away from exposed areas and into more suitable locations. If implemented correctly, erosion controls can effectively reduce the sediment loads entrained in storm water runoff from construction sites.
- Sediment controls are designed to intercept and filter out soil particles that have been detached and transported by the force of water. Storm drain inlets on the Project Site or within the project

[1] Planning and Land Development Handbook for Low Impact Development, Part B Planning Activities, 5th Edition; adopted by the City of Los Angeles, Board of Public Works on May 9, 2016.

vicinity (i.e., along streets immediately adjacent to the project boundary) should be adequately protected with an impoundment (i.e., gravel bags) around the inlet and equipped with a sediment filter (i.e., fiber roll). Bags should also be placed around areas of soil disturbing activities, such as grading or clearing.

- Stabilize construction entrance/exit points to reduce the tracking of sediments onto adjacent streets. Wind erosion controls should be employed in conjunction with tracking controls.
- Non-storm water management BMPs prohibit the discharge of materials other than storm water, as well as reduce the potential for pollutants from discharging at their source. Examples include avoiding paving and grinding operations during the rainy season (i.e., October 1 through April 30 each year) where feasible, and performing any vehicle equipment cleaning, fueling and maintenance in designated areas that are adequately protected and contained.
- Waste management consists of implementing procedural and structural BMPs for collecting, handling, storing and disposing of wastes generated by a construction project to prevent the release of waste materials into storm water discharges.

Through compliance with the General Permit including the preparation of a SWPPP, implementation of BMPs appropriate for each major phase of construction, and compliance with applicable City grading regulations, construction of the Project would not cause flooding, substantially increase or decrease the amount of surface water in a water body, or result in a permanent, adverse change to flow direction. The construction of the Project would also not result in discharges that would cause: (1) pollution that would impact the quality of waters of the state to a degree which negatively impacts beneficial uses of the waters; (2) contamination of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of diseases; or (3) nuisance that would be injurious to health, affect an entire community or neighborhood or any considerable number of persons, and occurs during or as a result of the treatment or disposal of wastes. With compliance with NPDES requirements and City of Los Angeles grading regulations, construction of the Project would not result in discharges that would violate any surface water quality standard or waste discharge requirements.

4.2. OPERATION

4.2.1. Surface Water Hydrology

Development of the Project would result in an increase in the landscaped areas throughout the Project Site and would reduce the amount of impervious surfaces from approximately 89 percent to 87 percent. Proposed flows decrease slightly over existing flows for both the 25 and 50-year storm events due to changes in slope and pervious surface ratios. Table 4 below provides an analysis of a 25-year and 50-year frequency design storm events following construction of the Project. Attachment D provides the Proposed On-Site Hydrology Map and output calculations are provided in Attachment E.

Table 4 Proposed Drainage Conditions

Drainage Area	Area (acres)	% Impervious	Q25 (cfs)	Q50 (cfs)
A-1	1.90	79	4.18	4.78
A-2	0.06	60	0.14	0.16
B-1	0.20	98	0.45	0.52
C-1	0.02	100	0.06	0.07

Drainage Area	Area (acres)	% Impervious	Q25 (cfs)	Q50 (cfs)
C-2	0.04	99	0.11	0.13
Proposed Total	2.22	87	4.94	5.66

Table 5 provides a comparison of the existing and proposed peak flows for the 25-year and 50-year storm events. As shown in the table, the total amount of runoff produced from the Project Site during a 25-year storm event under the proposed Project conditions is projected to decrease to 4.94 cubic feet per second (cfs), as compared to 5.67 cfs under existing conditions. For a 50-year event, the total project runoff is projected to decrease to 5.66 cfs under proposed Project conditions, as compared to 6.80 cfs under existing conditions.

Table 5 Existing Vs Proposed Drainage Conditions

Condition	Area (acres)	Q25 (cfs)	Q50 (cfs)
Existing	2.22	5.67	6.80
Proposed	2.22	4.94	5.66
Difference	0	-0.73	-1.14
% Increase or Decrease from Existing to Proposed Conditions	--	-12.9%	-16.8%

The above analysis includes the assumption based on the proposed Project design that additional landscaped area will be added along the property boundary, as compared to existing conditions, thereby increasing the pervious area of the Project Site. As shown in Table 5, the increase in permeable surfaces on the Project Site would result in a slight decrease of flows for a 25-year storm and 50-year storm event for the Project.

Based on the above, operation of the Project would not result in flooding, impact the capacity of the existing storm drain system, or worsen an existing flood condition. In addition, the Project would not substantially increase the amount of surface water in the local water body or result in a permanent adverse change in the drainage pattern that would result in an incremental effect on the capacity of the existing storm drain system.

4.2.2. Surface Water Quality

Stormwater runoff from the Project has the potential to discharge pollutants into the City and County storm drain system. Anticipated pollutants and typical source of the pollutants are listed in Table 6 below.

Table 6 Potential Pollutants

Potential Pollutants	Source of Pollutants
Sediment	Parking lots, driveways, building rooftops, landscape areas, road
Nutrients	Landscape areas, lawns
Pesticides	Landscape areas, lawns

Potential Pollutants	Source of Pollutants
Pathogens	Landscape areas, lawns, building rooftops
Trash/Debris	Parking lots, driveways, roadways, parks
Oil/Grease	Parking lots, driveways, roadways
Metals	Parking lots, driveways, roadways

To meet the local MS4 Permit and LID requirements consistent with the City's LID Ordinance and LID Manual (May 2016), stormwater management strategies will be implemented throughout the Project Site. Infiltration design features will be implemented to meet the local LID requirements.

The on-site LID measures may include such measures as drywell BMPs and storage vaults to satisfy the water quality requirements of the Project Site. Drywell BMPs are subsurface storage facilities that receive and temporarily store stormwater runoff prior to infiltrating into surrounding soils. Storage vaults add additional stormwater storage. Drywells would be appropriately sized in conformance with the LID Manual, and a drywell and detention system would be equipped with a pre-treatment system (hydrodynamic separator or equivalent) designed to reduce sediment loads and improve infiltration efficiency and LID feature lifespan. Other potential infiltration BMPs that may be utilized on-site include infiltration trenches, subsurface infiltration galleries, and permeable pavement. If infiltration is shown to be infeasible during site-specific soils investigations, an equivalent LID treatment method such as biotreatment will be utilized.

The existing Project Site does not have any structural or LID BMPs to treat or infiltrate stormwater. Therefore, implementation of the LID features for the Project consistent with the City's LID requirements would result in a substantial improvement in surface water quality runoff as compared to existing conditions. Implementation of the Project's BMP system in compliance with the City's LID requirements will result in the treatment of the required volume for the Project Site and the elimination of pollutant runoff up to the 85th percentile storm event.

With compliance with LID requirements, operation of the Project would not result in discharges that would cause: (1) an incremental increase in pollution which would alter the quality of the waters of the state to a degree which unreasonably affects beneficial uses of the waters; (2) an incremental increase of contamination of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of diseases; or (3) an incremental increase in the nuisance that would be injurious to health; affect an entire community or neighborhood, or any considerable numbers of persons; and occurs during or as a result of the treatment or disposal of wastes. With compliance with LID requirements, operation of the Project would not result in discharges that would violate any surface water quality standard or waste discharge requirements.

5. ATTACHMENTS

ATTACHMENT A – Ballona Creek Watershed Map

ATTACHMENT B – Existing On-Site Hydrology map

ATTACHMENT C – HydroCalc Hydrology Results for Existing Site

ATTACHMENT D – Proposed On-Site Hydrology Map

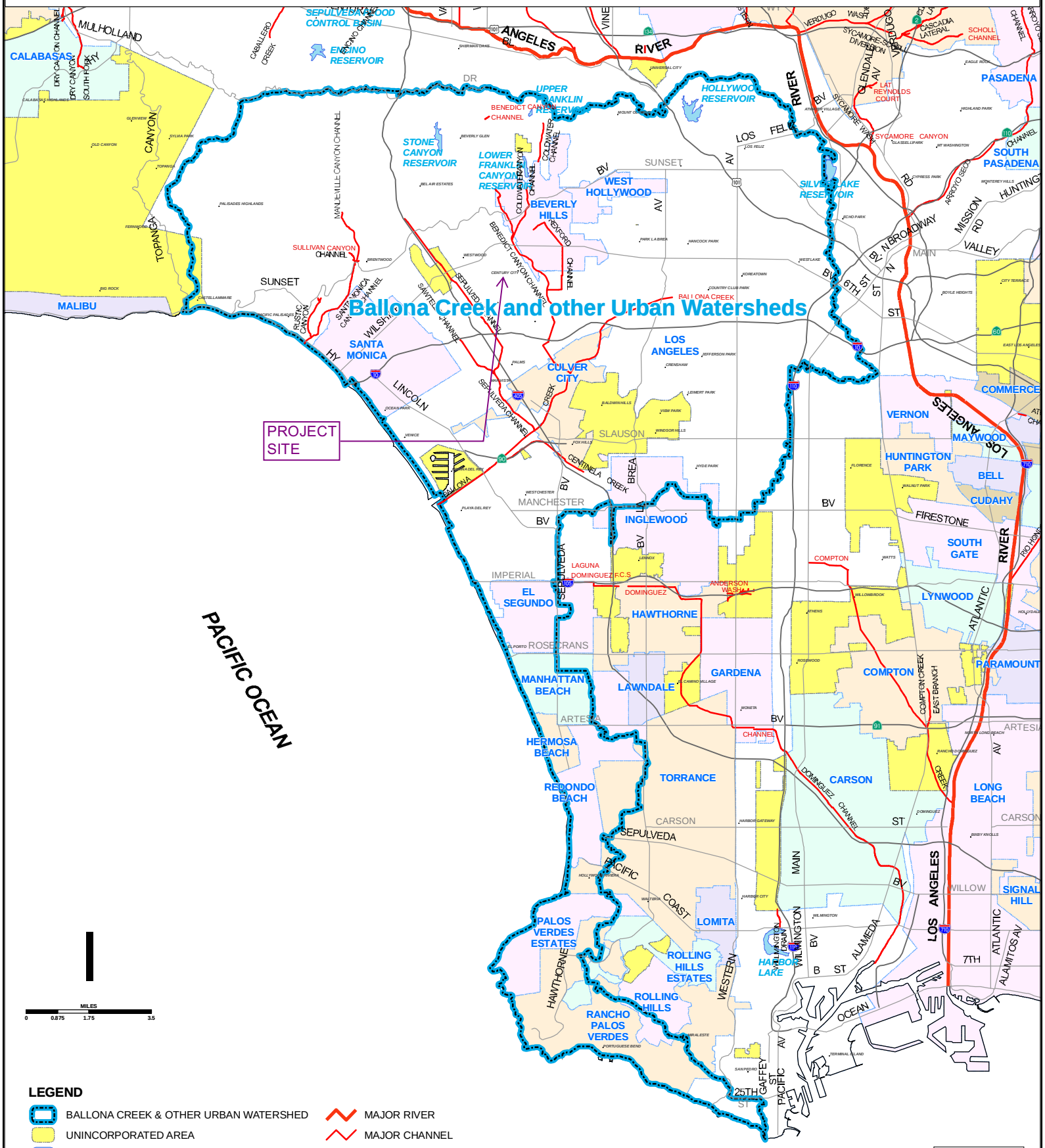
ATTACHMENT E – HydroCalc Hydrology Results for Proposed Site

ATTACHMENT A

BALLONA CREEK WATERSHED MAP

COUNTY OF LOS ANGELES

BALLONA CREEK & OTHER URBAN WATERSHEDS



LEGEND

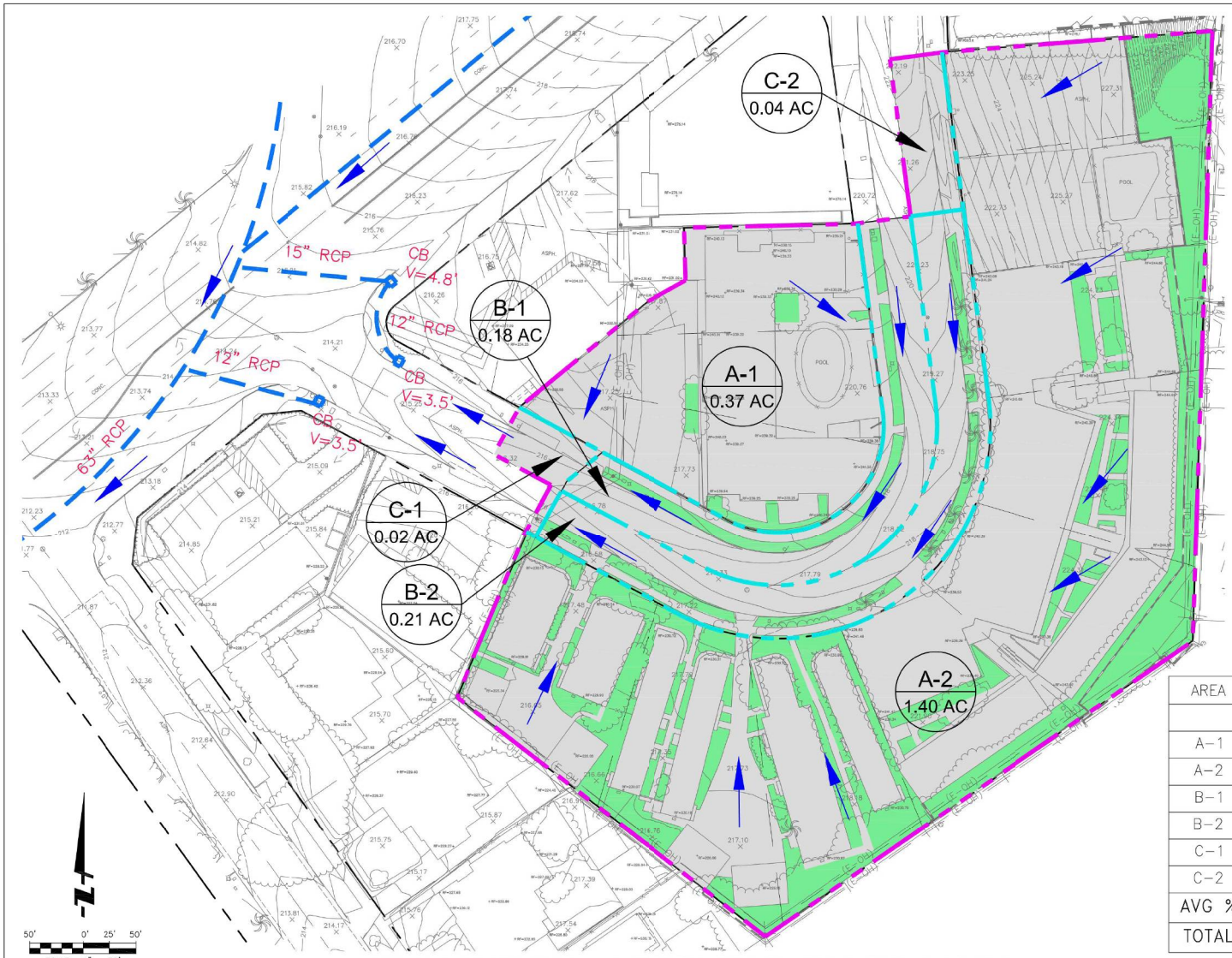
- BALLONA CREEK & OTHER URBAN WATERSHED
- UNINCORPORATED AREA
- DAM / LAKE / RESERVOIR
- MAJOR RIVER
- MAJOR CHANNEL

Data contained in this map is produced in whole or part from the Los Angeles County Department of Public Works' digital database.

Mapping & Property Management Division, Mapping & GIS Services Section

ATTACHMENT B

EXISTING ON-SITE HYDROLOGY MAP



LEGEND

- EXISTING STORM DRAIN
- A-# / 2.16 — DRAINAGE AREA DESIGNATION / ACRES
- SITE HYDROLOGIC BOUNDARY
- HYDROLOGY SUB-AREA
- DIRECTION OF FLOW
- PERVIOUS AREAS
- IMPERVIOUS AREAS

FLOW RATE	
	CFS
Q_{25}	5.67
Q_{50}	6.80

AREA	PERVIOUS		IMPERVIOUS		
	AC	%	AC	%	
A-1	0.17	5	0.20	95	
A-2	0.37	26	1.03	74	
B-1	0.03	16	0.15	84	
B-2	0.04	17	0.17	83	
C-1	0.00	0	0.02	100	
C-2	0.00	0	0.04	100	
AVG %		11		89	TOTAL
TOTAL	0.61		1.61		2.22

BELLWOOD - EXISTING ON-SITE HYDROLOGY MAP

10328-10384 AND 10341-10381 BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

FUSCOE ENGINEERING
600 Wilshire Blvd., Suite 1470, Los Angeles, California 90017
tel 213.988.8802 • fax 213.988.8803 • www.fuscoe.com

F:\Projects\1755\001\Exhibits\XH1755-001 - Bellwood Hydrology Exhibit - Existing - Areas.dwg (5/7/2019 8:11 AM) Plotted by: Alex Bennett

ATTACHMENT C

HYDROCALC HYDROLOGY RESULTS FOR EXISTING SITE

Peak Flow Hydrologic Analysis

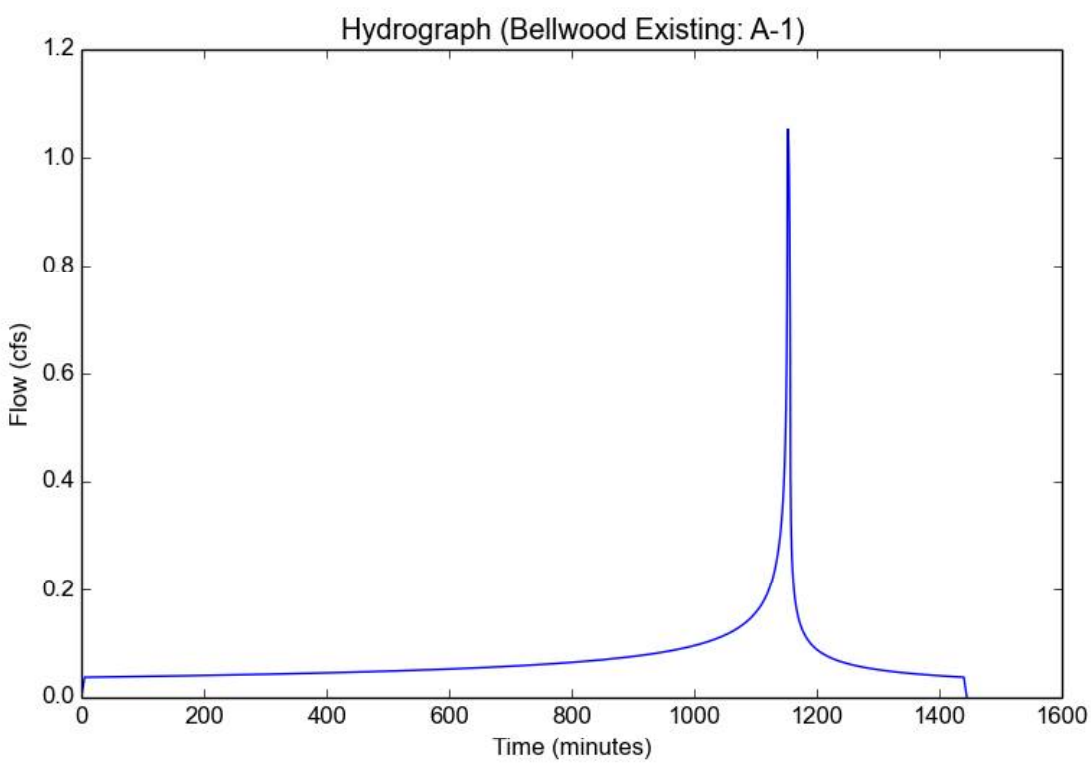
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment D - Existing Hydrocalc/Bellwood - A-1 25 yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Existing
Subarea ID	A-1
Area (ac)	0.37
Flow Path Length (ft)	300.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.95
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.2856
Peak Intensity (in/hr)	3.1535
Undeveloped Runoff Coefficient (Cu)	0.9333
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	1.0501
Burned Peak Flow Rate (cfs)	1.0501
24-Hr Clear Runoff Volume (ac-ft)	0.1396
24-Hr Clear Runoff Volume (cu-ft)	6080.6996



Peak Flow Hydrologic Analysis

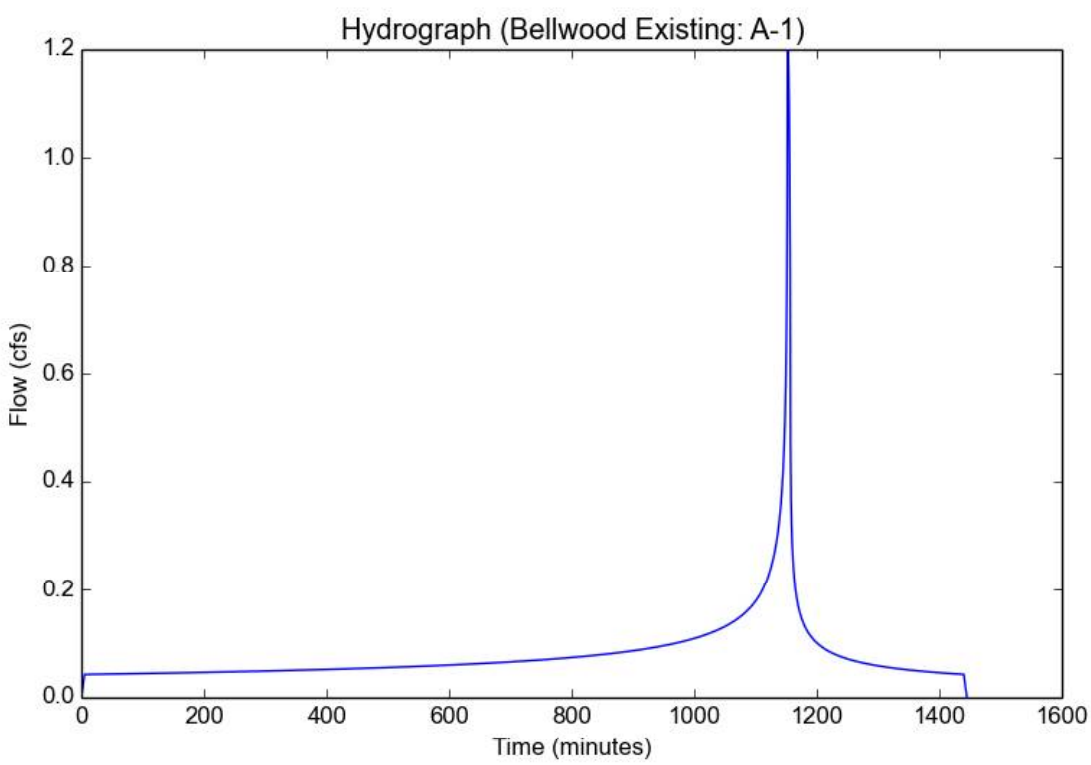
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment D - Existing Hydrocalc/Bellwood - A-1 50yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Existing
Subarea ID	A-1
Area (ac)	0.37
Flow Path Length (ft)	300.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.95
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.02
Peak Intensity (in/hr)	3.5917
Undeveloped Runoff Coefficient (Cu)	0.9495
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	1.196
Burned Peak Flow Rate (cfs)	1.196
24-Hr Clear Runoff Volume (ac-ft)	0.1591
24-Hr Clear Runoff Volume (cu-ft)	6930.187



Peak Flow Hydrologic Analysis

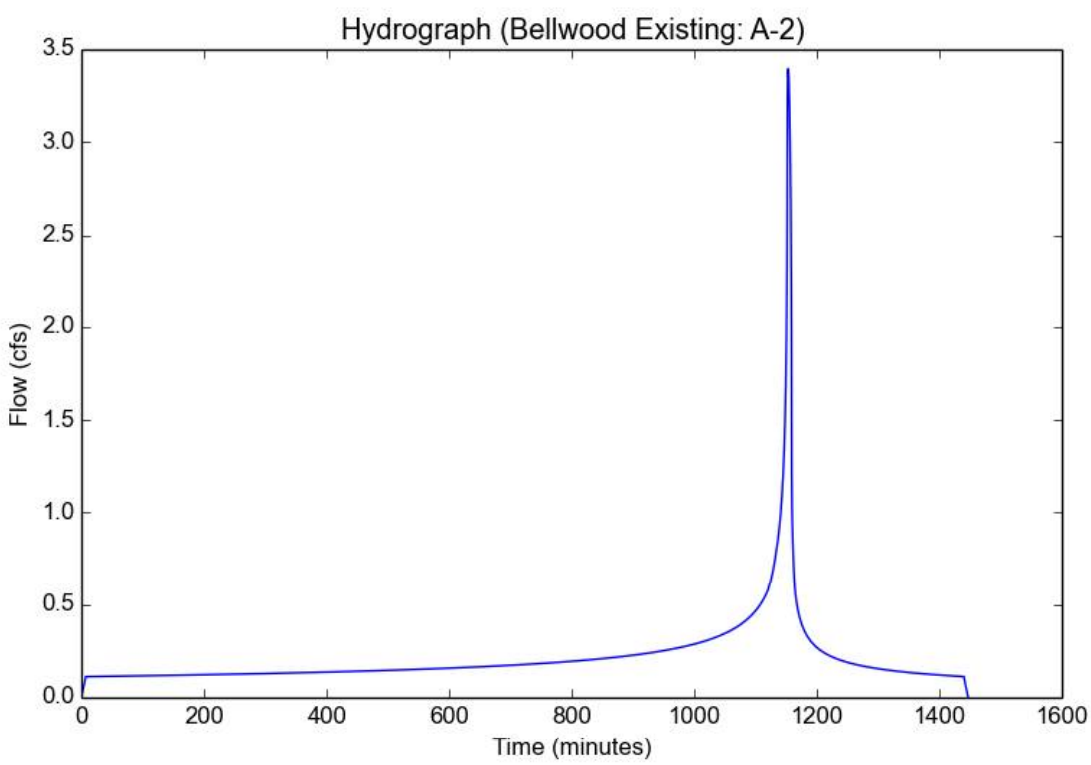
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment D - Existing Hydrocalc/Bellwood - A-2 25yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Existing
Subarea ID	A-2
Area (ac)	1.4
Flow Path Length (ft)	530.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.73
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.2856
Peak Intensity (in/hr)	2.6922
Undeveloped Runoff Coefficient (Cu)	0.9047
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	7.0
Clear Peak Flow Rate (cfs)	3.3922
Burned Peak Flow Rate (cfs)	3.3922
24-Hr Clear Runoff Volume (ac-ft)	0.4305
24-Hr Clear Runoff Volume (cu-ft)	18753.0248



Peak Flow Hydrologic Analysis

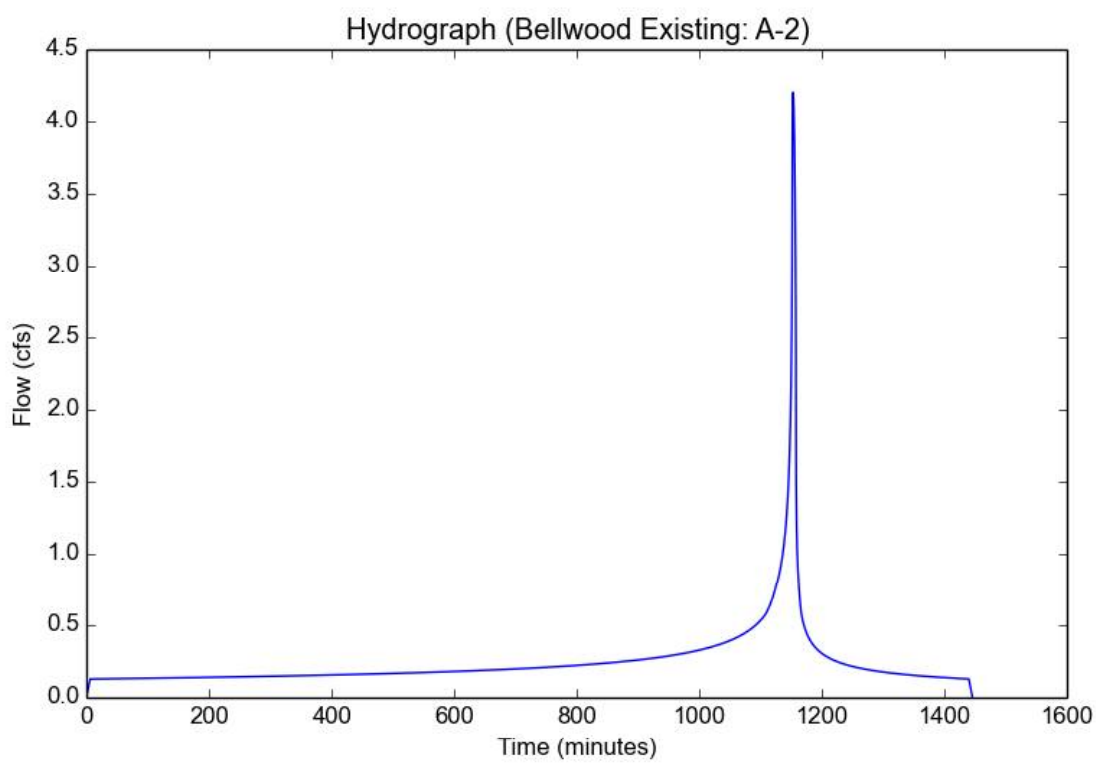
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment D - Existing Hydrocalc/Bellwood - A-2 50yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Existing
Subarea ID	A-2
Area (ac)	1.4
Flow Path Length (ft)	530.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.73
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.02
Peak Intensity (in/hr)	3.2967
Undeveloped Runoff Coefficient (Cu)	0.9393
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	4.1539
Burned Peak Flow Rate (cfs)	4.1539
24-Hr Clear Runoff Volume (ac-ft)	0.4925
24-Hr Clear Runoff Volume (cu-ft)	21452.5558



Peak Flow Hydrologic Analysis

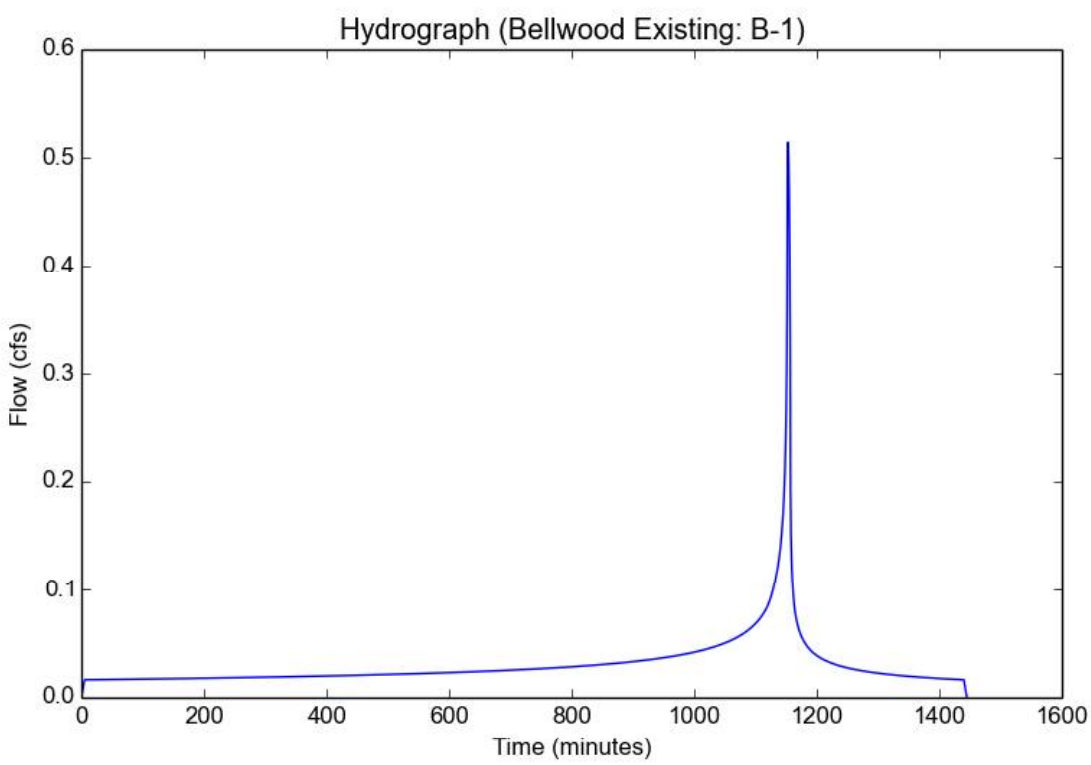
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment D - Existing Hydrocalc/Bellwood - B-1 25yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Existing
Subarea ID	B-1
Area (ac)	0.18
Flow Path Length (ft)	285.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.84
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.2856
Peak Intensity (in/hr)	3.1535
Undeveloped Runoff Coefficient (Cu)	0.9333
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.5109
Burned Peak Flow Rate (cfs)	0.5109
24-Hr Clear Runoff Volume (ac-ft)	0.0616
24-Hr Clear Runoff Volume (cu-ft)	2684.5832



Peak Flow Hydrologic Analysis

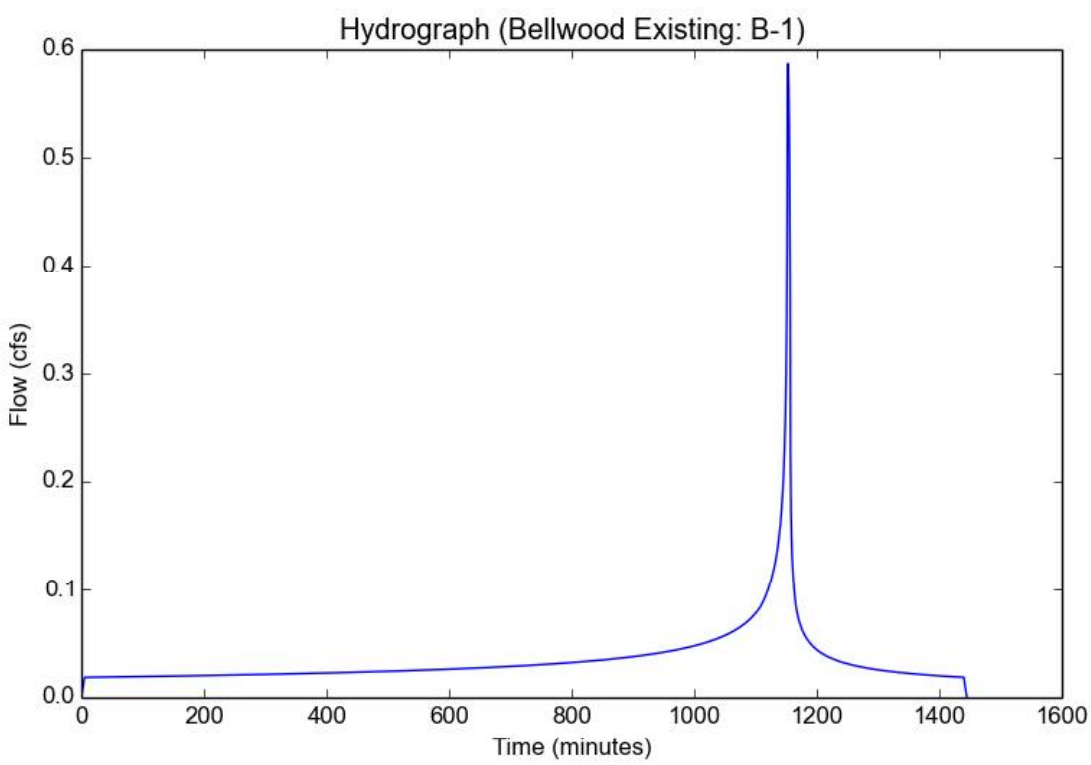
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment D - Existing Hydrocalc/Bellwood - B-1 50yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Existing
Subarea ID	B-1
Area (ac)	0.18
Flow Path Length (ft)	285.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.84
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.02
Peak Intensity (in/hr)	3.5917
Undeveloped Runoff Coefficient (Cu)	0.9495
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.5819
Burned Peak Flow Rate (cfs)	0.5819
24-Hr Clear Runoff Volume (ac-ft)	0.0704
24-Hr Clear Runoff Volume (cu-ft)	3064.7122



Peak Flow Hydrologic Analysis

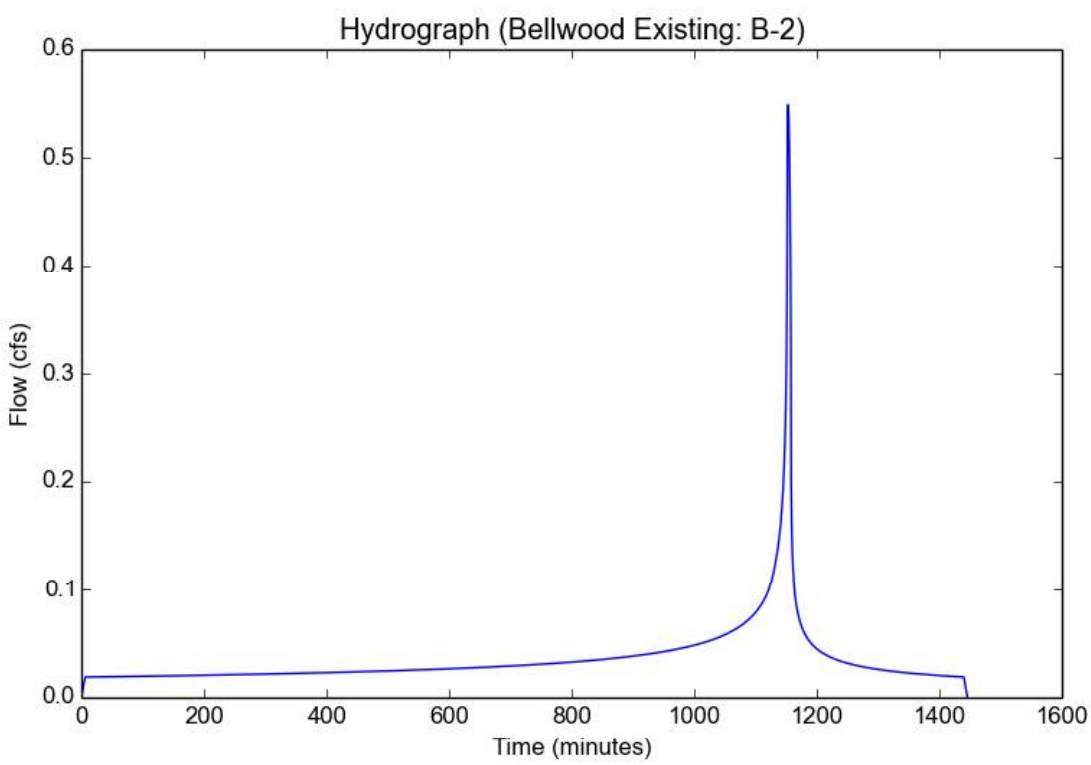
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment D - Existing Hydrocalc/Bellwood - B-2 25yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Existing
Subarea ID	B-2
Area (ac)	0.21
Flow Path Length (ft)	385.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.83
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.2856
Peak Intensity (in/hr)	2.8945
Undeveloped Runoff Coefficient (Cu)	0.9192
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	0.5471
Burned Peak Flow Rate (cfs)	0.5471
24-Hr Clear Runoff Volume (ac-ft)	0.0712
24-Hr Clear Runoff Volume (cu-ft)	3103.0508



Peak Flow Hydrologic Analysis

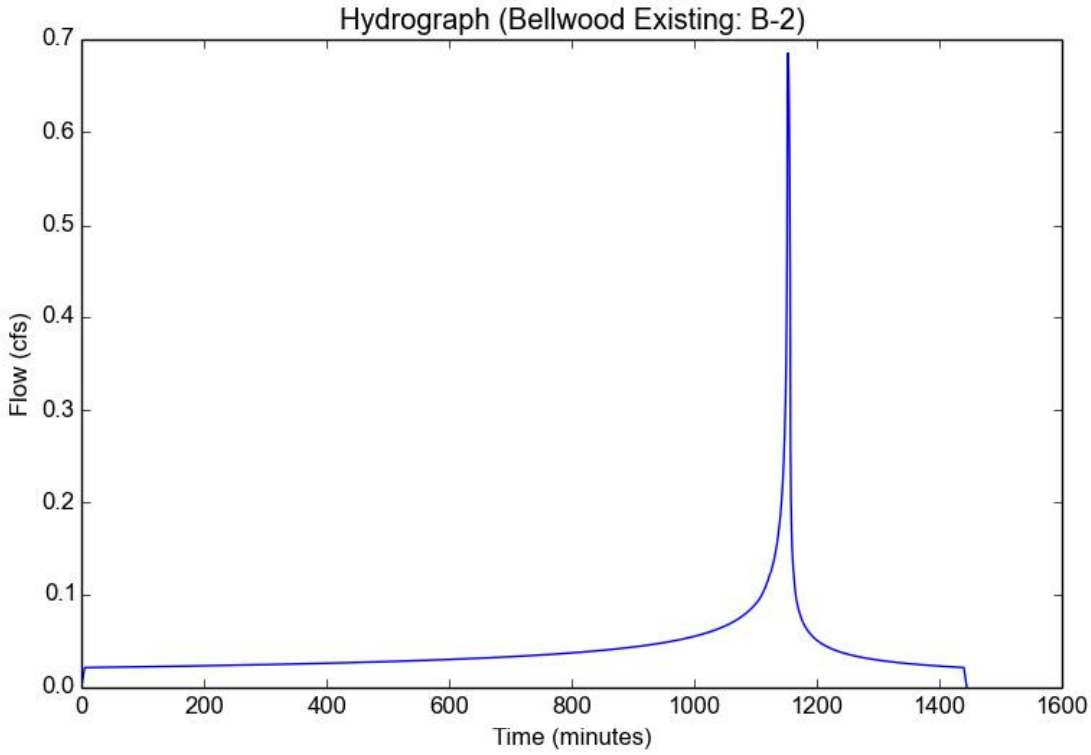
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment D - Existing Hydrocalc/Bellwood - B-2 50yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Existing
Subarea ID	B-2
Area (ac)	0.21
Flow Path Length (ft)	385.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.83
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.02
Peak Intensity (in/hr)	3.5917
Undeveloped Runoff Coefficient (Cu)	0.9495
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.6788
Burned Peak Flow Rate (cfs)	0.6788
24-Hr Clear Runoff Volume (ac-ft)	0.0813
24-Hr Clear Runoff Volume (cu-ft)	3542.9656



Peak Flow Hydrologic Analysis

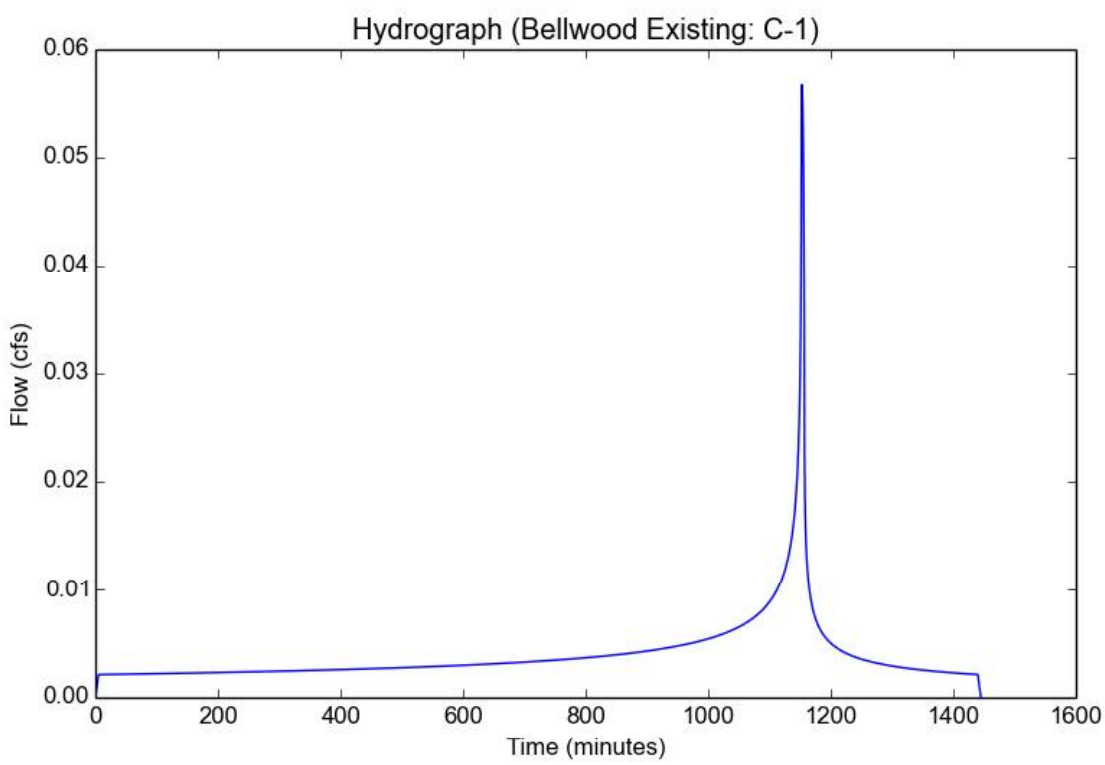
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment D - Existing Hydrocalc/Bellwood - C-1 25yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Existing
Subarea ID	C-1
Area (ac)	0.02
Flow Path Length (ft)	50.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	1.0
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.2856
Peak Intensity (in/hr)	3.1535
Undeveloped Runoff Coefficient (Cu)	0.9333
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.0568
Burned Peak Flow Rate (cfs)	0.0568
24-Hr Clear Runoff Volume (ac-ft)	0.0079
24-Hr Clear Runoff Volume (cu-ft)	342.5044



Peak Flow Hydrologic Analysis

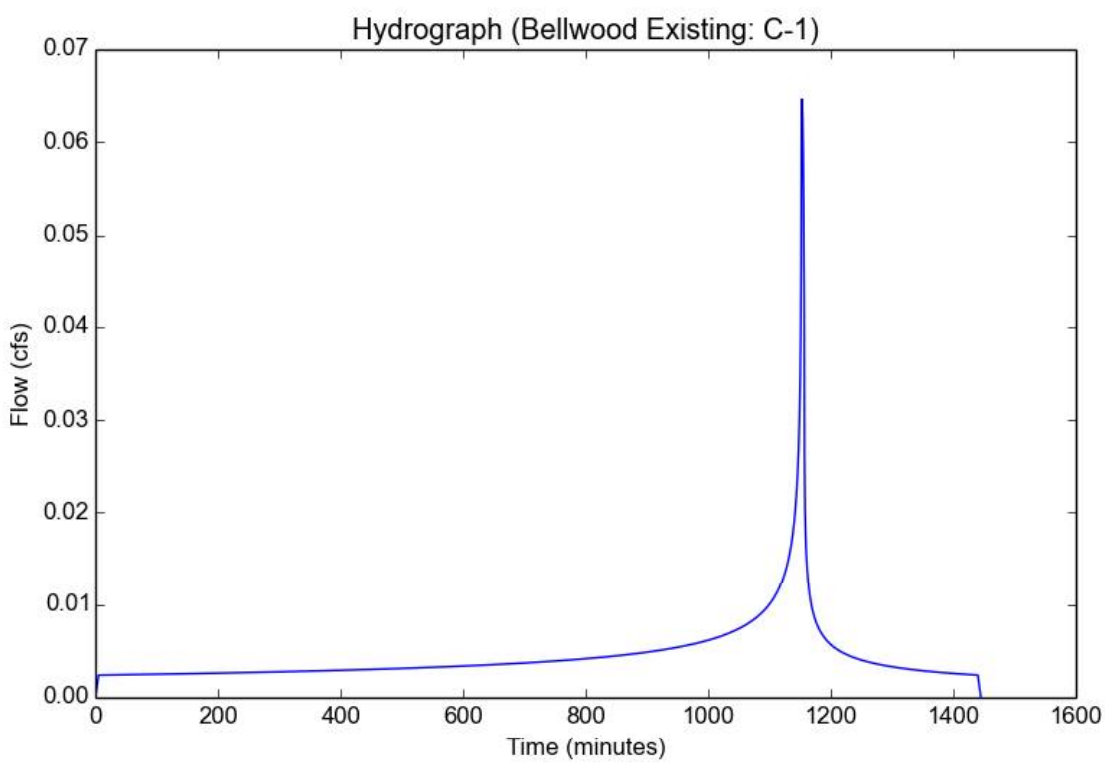
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment D - Existing Hydrocalc/Bellwood - C-1 50yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Existing
Subarea ID	C-1
Area (ac)	0.02
Flow Path Length (ft)	50.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	1.0
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.02
Peak Intensity (in/hr)	3.5917
Undeveloped Runoff Coefficient (Cu)	0.9495
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.0647
Burned Peak Flow Rate (cfs)	0.0647
24-Hr Clear Runoff Volume (ac-ft)	0.009
24-Hr Clear Runoff Volume (cu-ft)	390.0961



Peak Flow Hydrologic Analysis

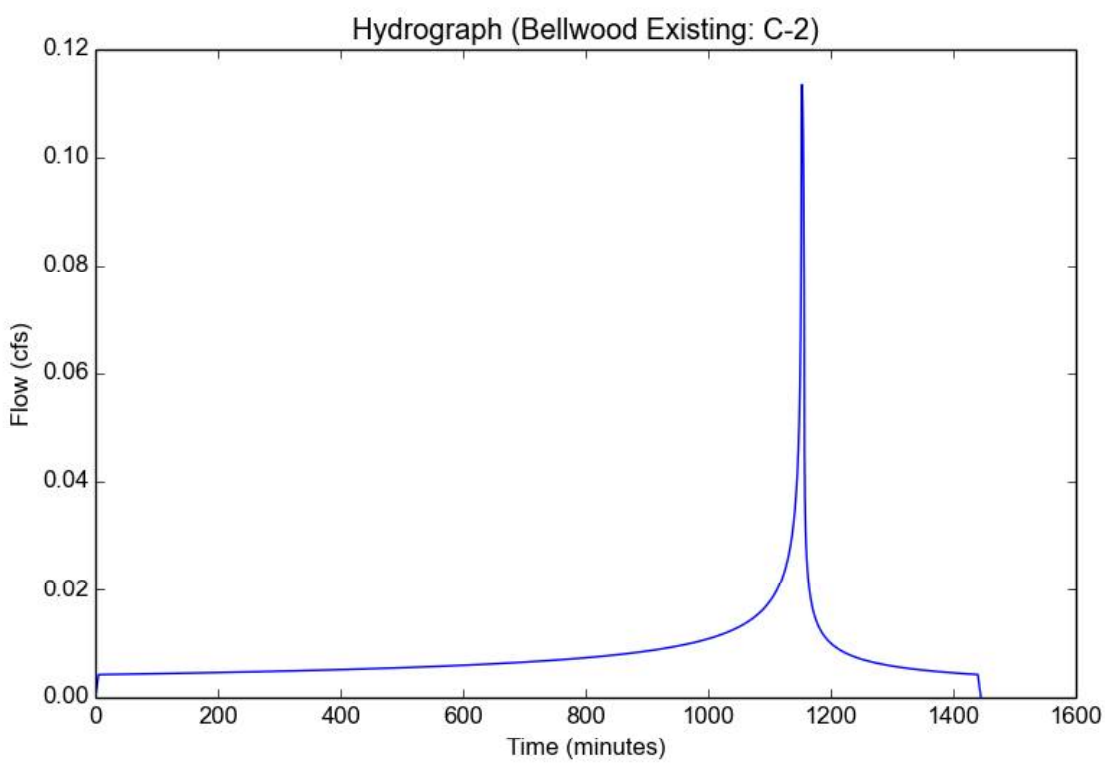
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment D - Existing Hydrocalc/Bellwood - C-2 25yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Existing
Subarea ID	C-2
Area (ac)	0.04
Flow Path Length (ft)	360.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	1.0
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.2856
Peak Intensity (in/hr)	3.1535
Undeveloped Runoff Coefficient (Cu)	0.9333
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.1135
Burned Peak Flow Rate (cfs)	0.1135
24-Hr Clear Runoff Volume (ac-ft)	0.0157
24-Hr Clear Runoff Volume (cu-ft)	685.0088



Peak Flow Hydrologic Analysis

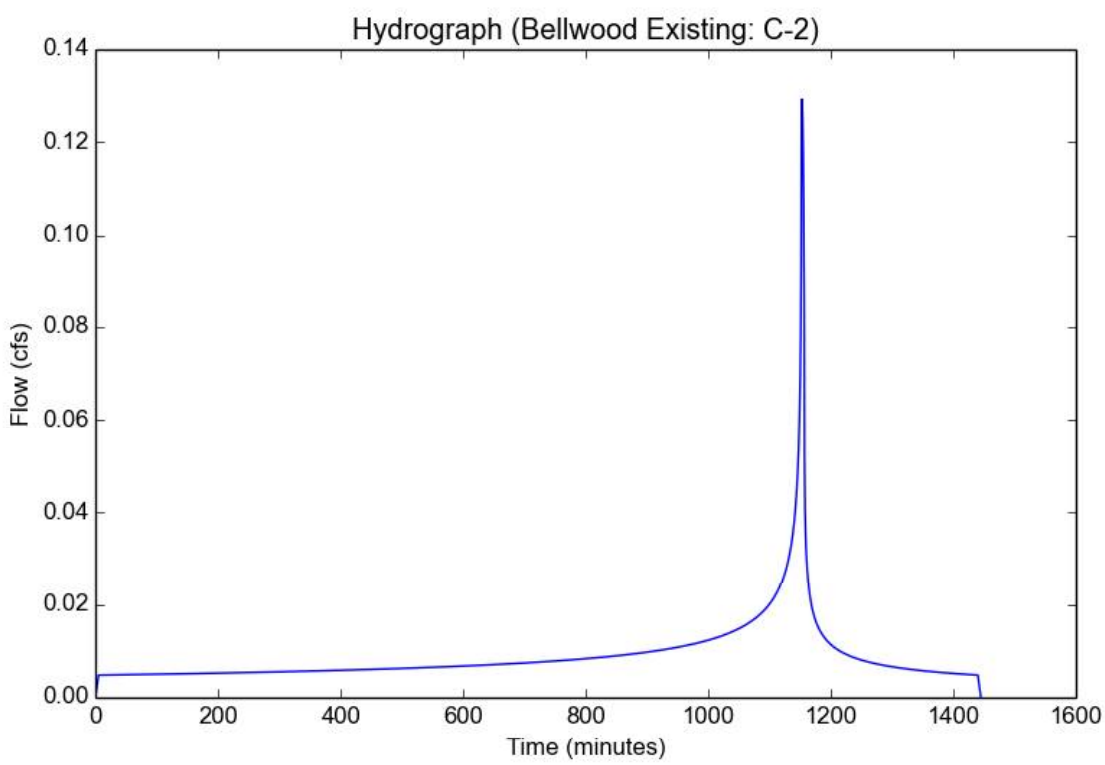
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment D - Existing Hydrocalc/Bellwood - C-2 50yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Existing
Subarea ID	C-2
Area (ac)	0.04
Flow Path Length (ft)	360.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	1.0
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

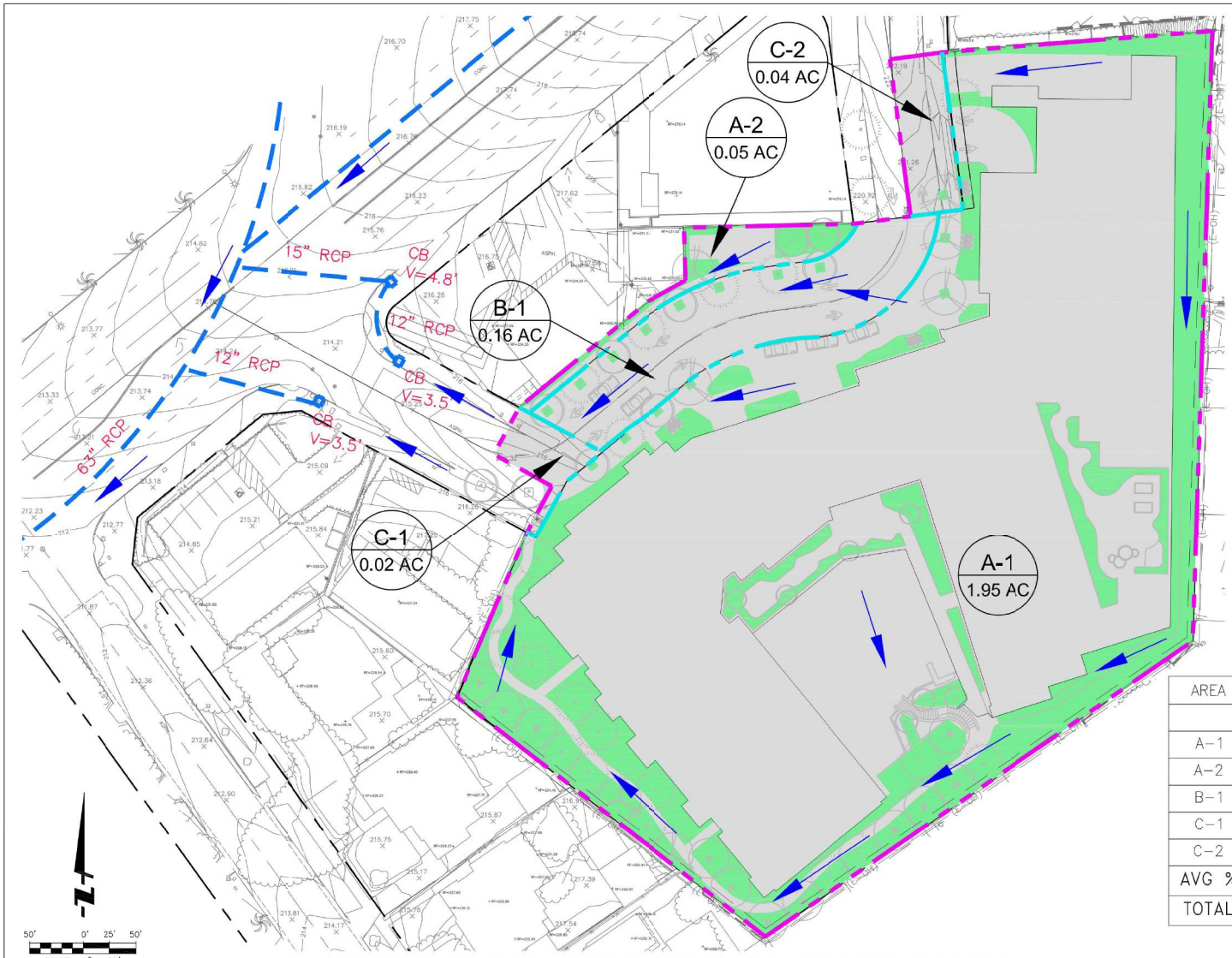
Output Results

Modeled (50-yr) Rainfall Depth (in)	6.02
Peak Intensity (in/hr)	3.5917
Undeveloped Runoff Coefficient (Cu)	0.9495
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.1293
Burned Peak Flow Rate (cfs)	0.1293
24-Hr Clear Runoff Volume (ac-ft)	0.0179
24-Hr Clear Runoff Volume (cu-ft)	780.1922



ATTACHMENT D

PROPOSED ON-SITE HYDROLOGY MAP



LEGEND

- EXISTING STORM DRAIN
- A-# / 2.16 — DRAINAGE AREA DESIGNATION / ACRES
- SITE HYDROLOGIC BOUNDARY
- HYDROLOGY SUB-AREA
- DIRECTION OF FLOW
- PERVIOUS AREAS
- IMPERVIOUS AREAS

FLOW RATE	
	CFS
Q_{25}	4.94
Q_{50}	5.63
Q_{LID}	0.52

AREA	PERVIOUS		IMPERVIOUS		
	AC	%	AC	%	
A-1	0.39	21	1.56	79	
A-2	0.02	40	0.03	60	
B-1	0.00	2	0.16	98	
C-1	0.00	0	0.02	100	
C-2	0.00	1	0.04	99	
AVG %		13		87	TOTAL
TOTAL	0.41		1.81		2.22

BELLWOOD - PROPOSED ON-SITE HYDROLOGY MAP

10328-10384 AND 10341-10381 BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA

FUSCOE ENGINEERING
600 Wilshire Blvd., Suite 1470, Los Angeles, California 90017
tel 213.988.8802 • fax 213.988.8803 • www.fuscoe.com

F:\Projects\1755\001\Exhibits\XH1755-001 - Bellwood Hydrology Exhibit - Proposed - Areas.dwg (5/7/2019 7:57 AM) Plotted by: Alex Bennett

ATTACHMENT E

HYDROCALC HYDROLOGY RESULTS FOR PROPOSED SITE

Peak Flow Hydrologic Analysis

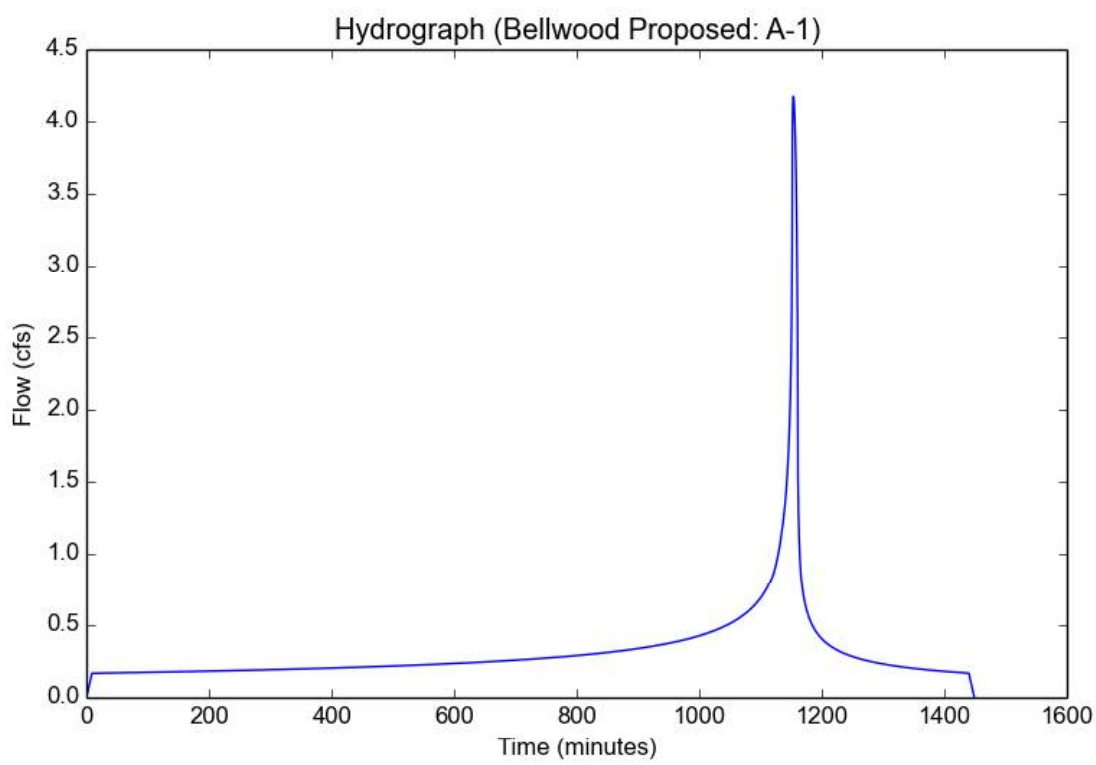
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment H - Proposed Hydrocalc/Bellwood Proposed - A-1 - 25yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Proposed
Subarea ID	A-1
Area (ac)	1.95
Flow Path Length (ft)	720.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.79
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.2856
Peak Intensity (in/hr)	2.3923
Undeveloped Runoff Coefficient (Cu)	0.8768
Developed Runoff Coefficient (Cd)	0.8951
Time of Concentration (min)	9.0
Clear Peak Flow Rate (cfs)	4.1757
Burned Peak Flow Rate (cfs)	4.1757
24-Hr Clear Runoff Volume (ac-ft)	0.6367
24-Hr Clear Runoff Volume (cu-ft)	27735.3629



Peak Flow Hydrologic Analysis

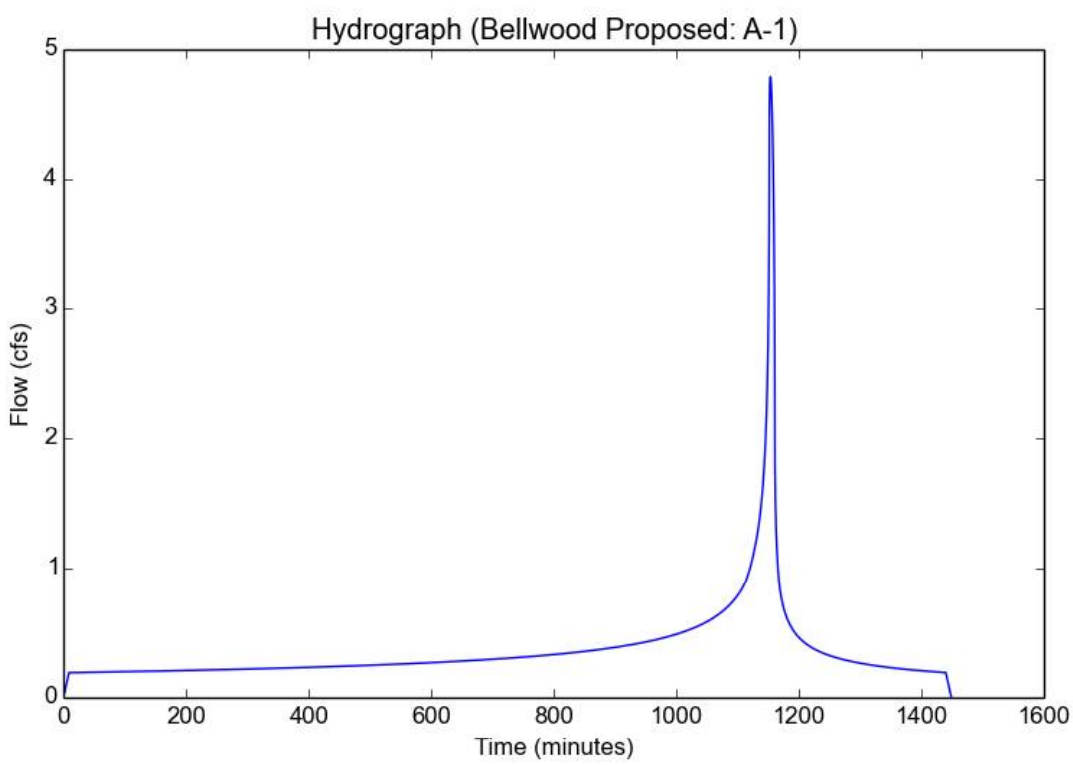
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment H - Proposed Hydrocalc/Bellwood Proposed - A-1 - 50yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Proposed
Subarea ID	A-1
Area (ac)	1.95
Flow Path Length (ft)	720.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.79
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.02
Peak Intensity (in/hr)	2.7247
Undeveloped Runoff Coefficient (Cu)	0.907
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	9.0
Clear Peak Flow Rate (cfs)	4.7819
Burned Peak Flow Rate (cfs)	4.7819
24-Hr Clear Runoff Volume (ac-ft)	0.7276
24-Hr Clear Runoff Volume (cu-ft)	31694.4396



Peak Flow Hydrologic Analysis

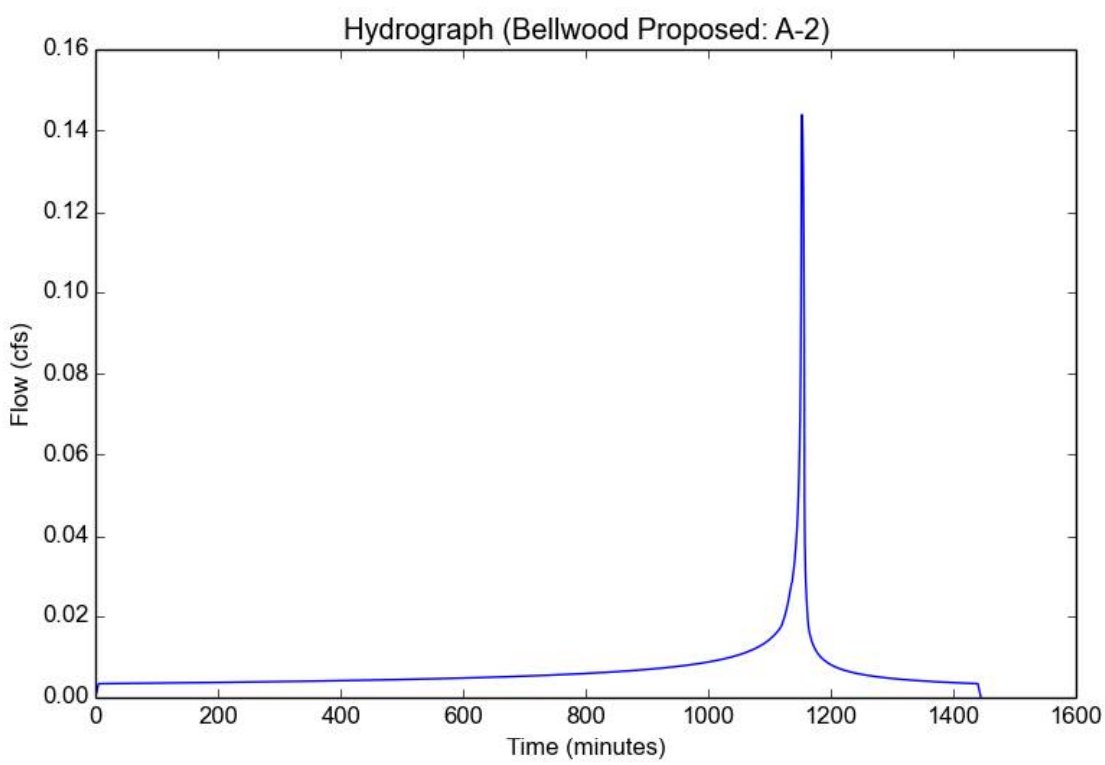
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment H - Proposed Hydrocalc/Bellwood Proposed - A-2 - 25yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Proposed
Subarea ID	A-2
Area (ac)	0.05
Flow Path Length (ft)	185.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.6
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.2856
Peak Intensity (in/hr)	3.1535
Undeveloped Runoff Coefficient (Cu)	0.9333
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.1419
Burned Peak Flow Rate (cfs)	0.1419
24-Hr Clear Runoff Volume (ac-ft)	0.0133
24-Hr Clear Runoff Volume (cu-ft)	579.9024



Peak Flow Hydrologic Analysis

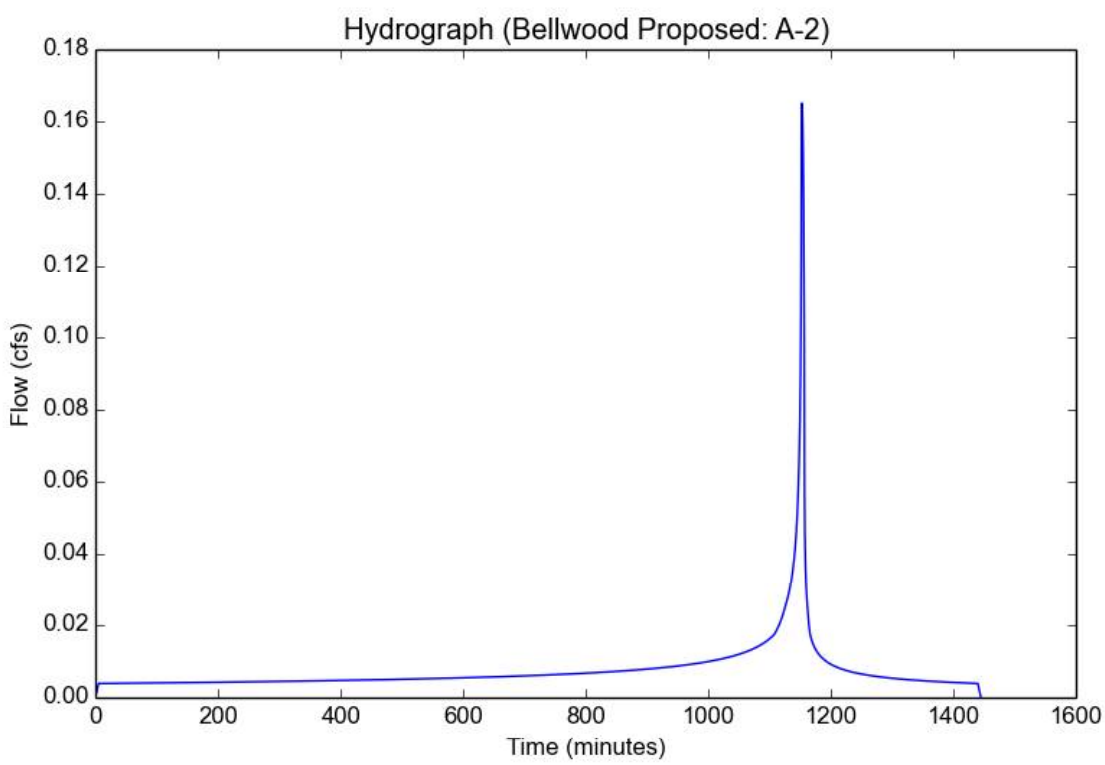
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment H - Proposed Hydrocalc/Bellwood Proposed - A-2 - 50yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Proposed
Subarea ID	A-2
Area (ac)	0.05
Flow Path Length (ft)	185.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.6
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.02
Peak Intensity (in/hr)	3.5917
Undeveloped Runoff Coefficient (Cu)	0.9495
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.1616
Burned Peak Flow Rate (cfs)	0.1616
24-Hr Clear Runoff Volume (ac-ft)	0.0153
24-Hr Clear Runoff Volume (cu-ft)	665.4119



Peak Flow Hydrologic Analysis

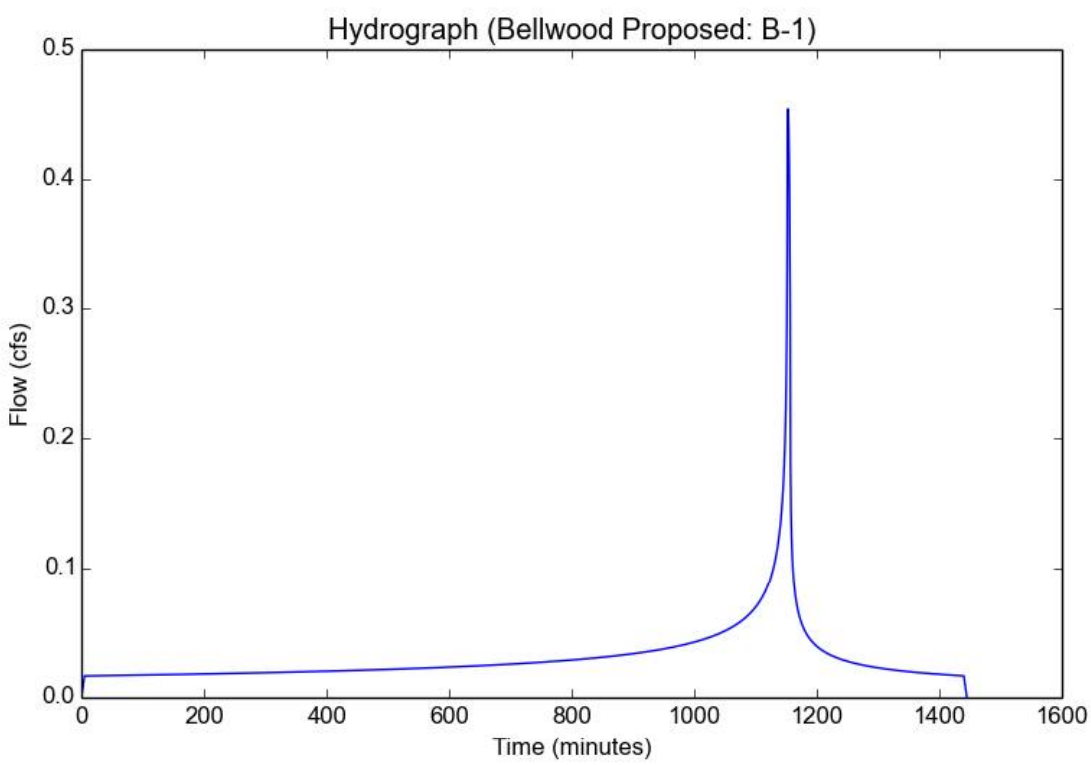
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment H - Proposed Hydrocalc/Bellwood Proposed - B-1 - 25yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Proposed
Subarea ID	B-1
Area (ac)	0.16
Flow Path Length (ft)	225.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.98
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.2856
Peak Intensity (in/hr)	3.1535
Undeveloped Runoff Coefficient (Cu)	0.9333
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.4541
Burned Peak Flow Rate (cfs)	0.4541
24-Hr Clear Runoff Volume (ac-ft)	0.0619
24-Hr Clear Runoff Volume (cu-ft)	2695.8178



Peak Flow Hydrologic Analysis

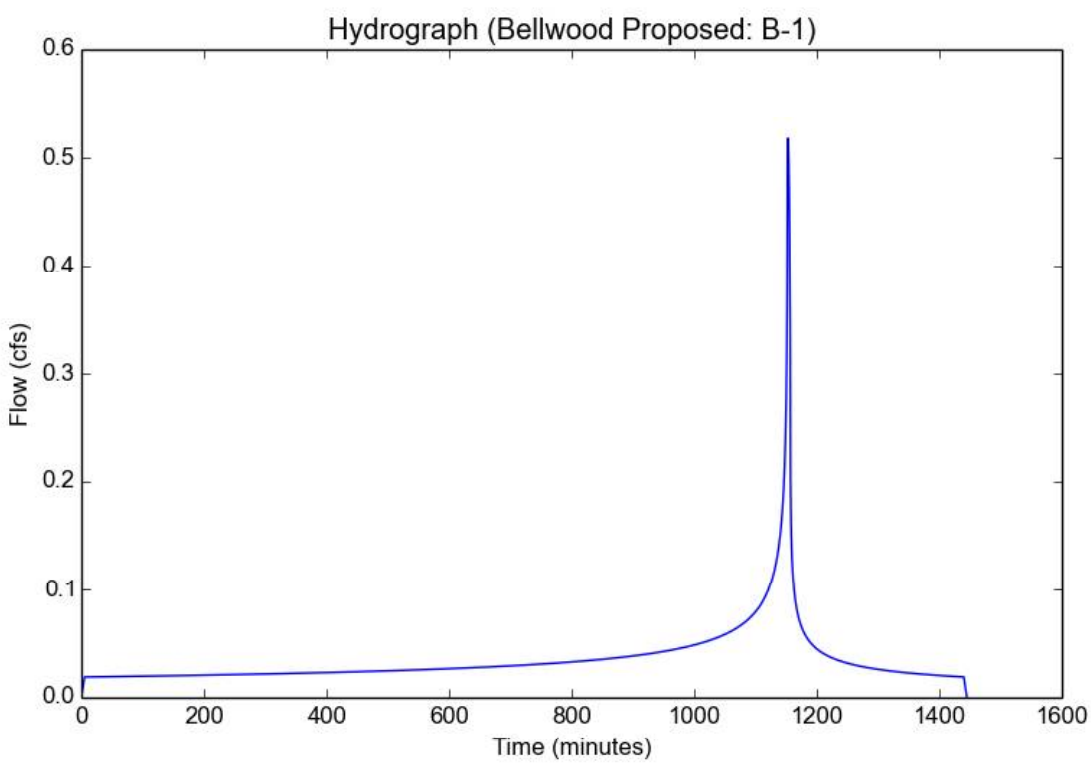
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment H - Proposed Hydrocalc/Bellwood Proposed - B-1 - 50yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Proposed
Subarea ID	B-1
Area (ac)	0.16
Flow Path Length (ft)	225.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.98
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.02
Peak Intensity (in/hr)	3.5917
Undeveloped Runoff Coefficient (Cu)	0.9495
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.5172
Burned Peak Flow Rate (cfs)	0.5172
24-Hr Clear Runoff Volume (ac-ft)	0.0705
24-Hr Clear Runoff Volume (cu-ft)	3071.1964



Peak Flow Hydrologic Analysis

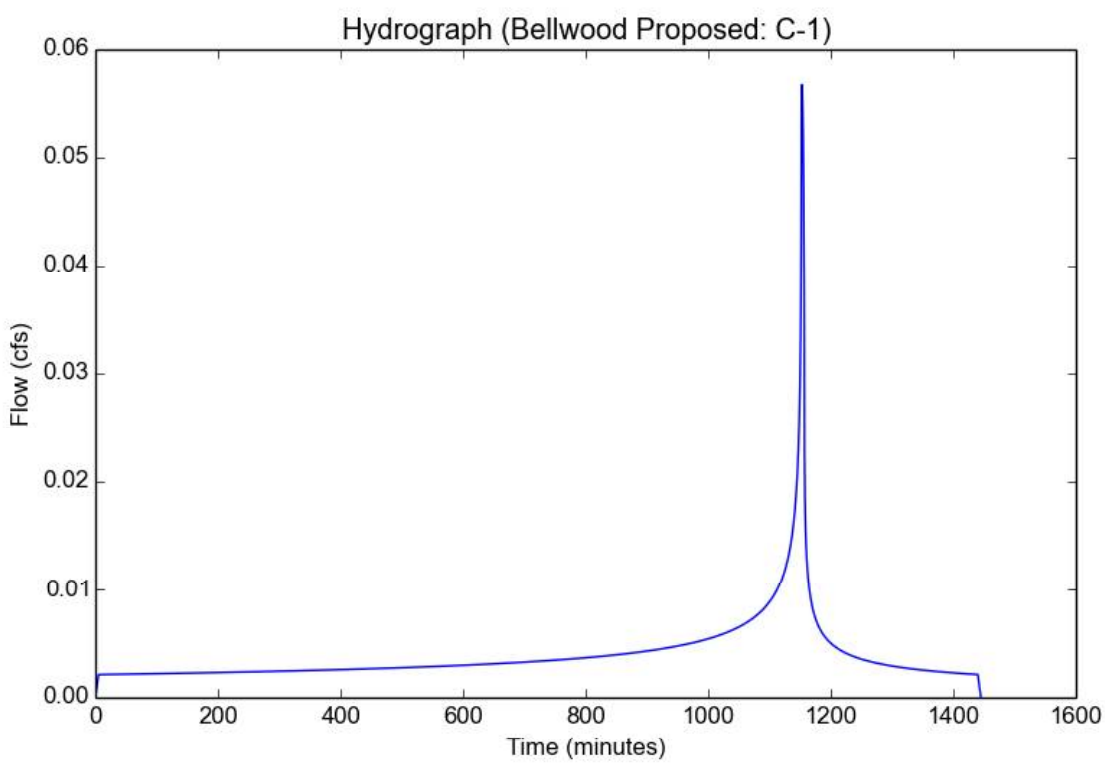
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment H - Proposed Hydrocalc/Bellwood Proposed - C-1 - 25yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Proposed
Subarea ID	C-1
Area (ac)	0.02
Flow Path Length (ft)	50.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	1.0
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.2856
Peak Intensity (in/hr)	3.1535
Undeveloped Runoff Coefficient (Cu)	0.9333
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.0568
Burned Peak Flow Rate (cfs)	0.0568
24-Hr Clear Runoff Volume (ac-ft)	0.0079
24-Hr Clear Runoff Volume (cu-ft)	342.5044



Peak Flow Hydrologic Analysis

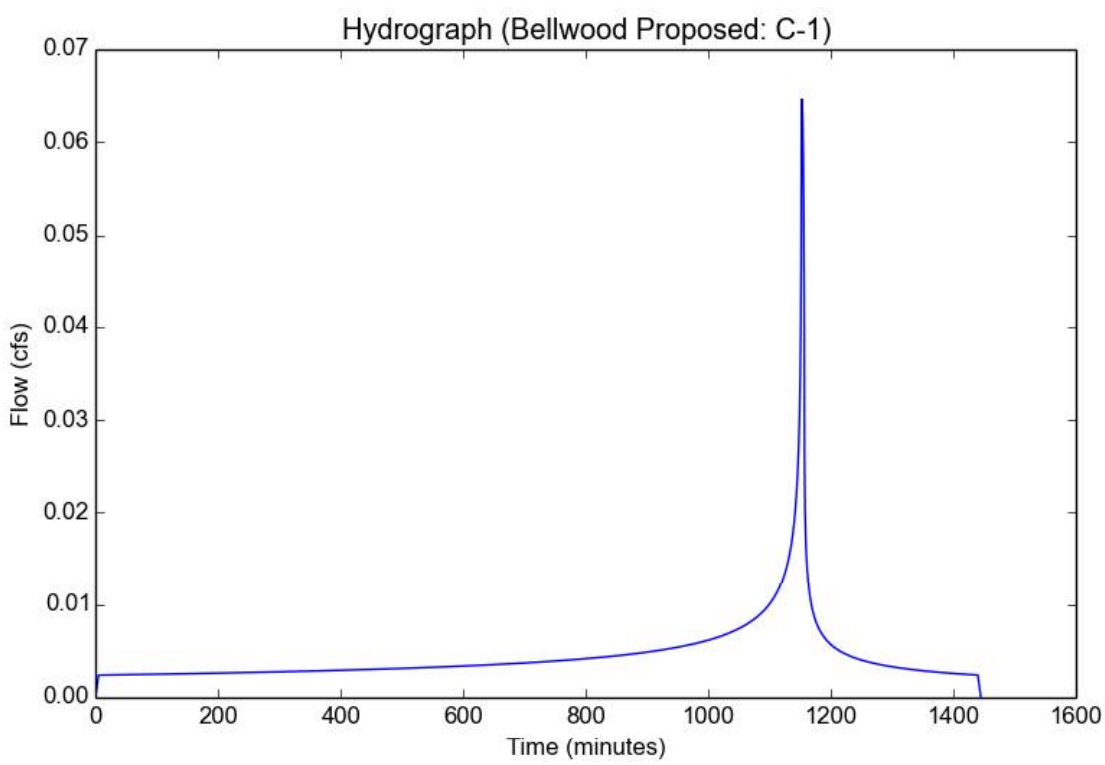
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment H - Proposed Hydrocalc/Bellwood Proposed - C-1 - 50yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Proposed
Subarea ID	C-1
Area (ac)	0.02
Flow Path Length (ft)	50.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	1.0
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.02
Peak Intensity (in/hr)	3.5917
Undeveloped Runoff Coefficient (Cu)	0.9495
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.0647
Burned Peak Flow Rate (cfs)	0.0647
24-Hr Clear Runoff Volume (ac-ft)	0.009
24-Hr Clear Runoff Volume (cu-ft)	390.0961



Peak Flow Hydrologic Analysis

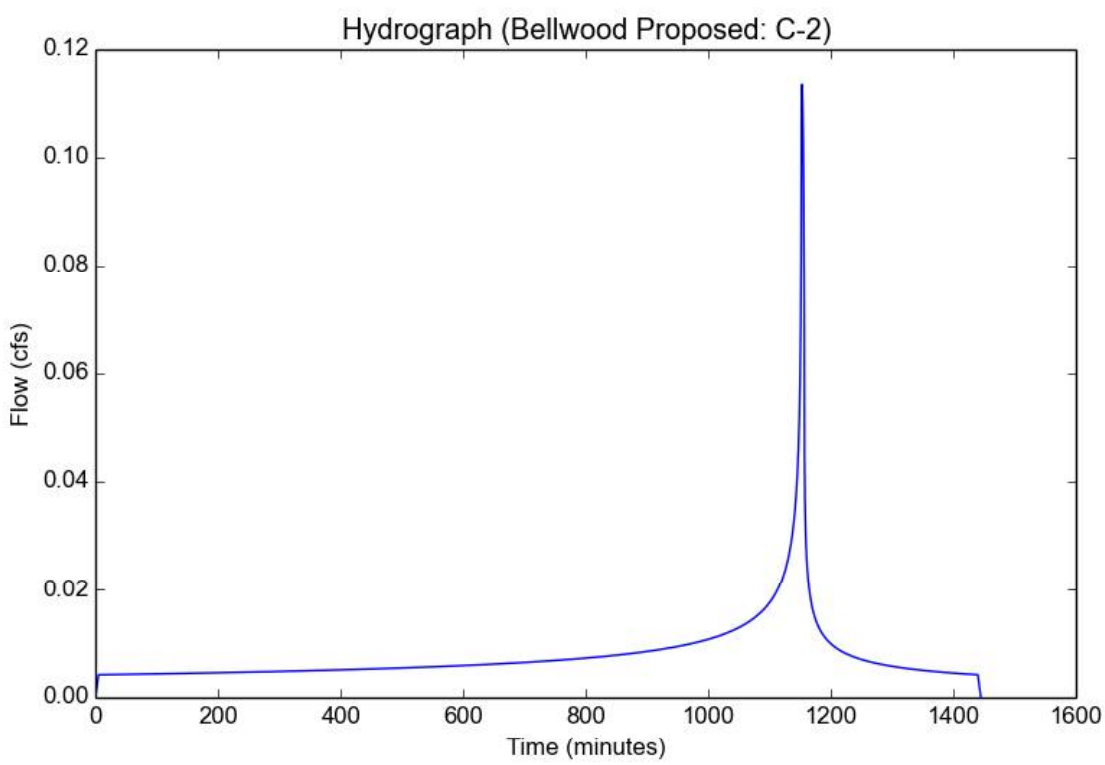
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment H - Proposed Hydrocalc/Bellwood Proposed - C-2 - 25yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Proposed
Subarea ID	C-2
Area (ac)	0.04
Flow Path Length (ft)	360.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.99
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.2856
Peak Intensity (in/hr)	3.1535
Undeveloped Runoff Coefficient (Cu)	0.9333
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.1135
Burned Peak Flow Rate (cfs)	0.1135
24-Hr Clear Runoff Volume (ac-ft)	0.0156
24-Hr Clear Runoff Volume (cu-ft)	679.4816



Peak Flow Hydrologic Analysis

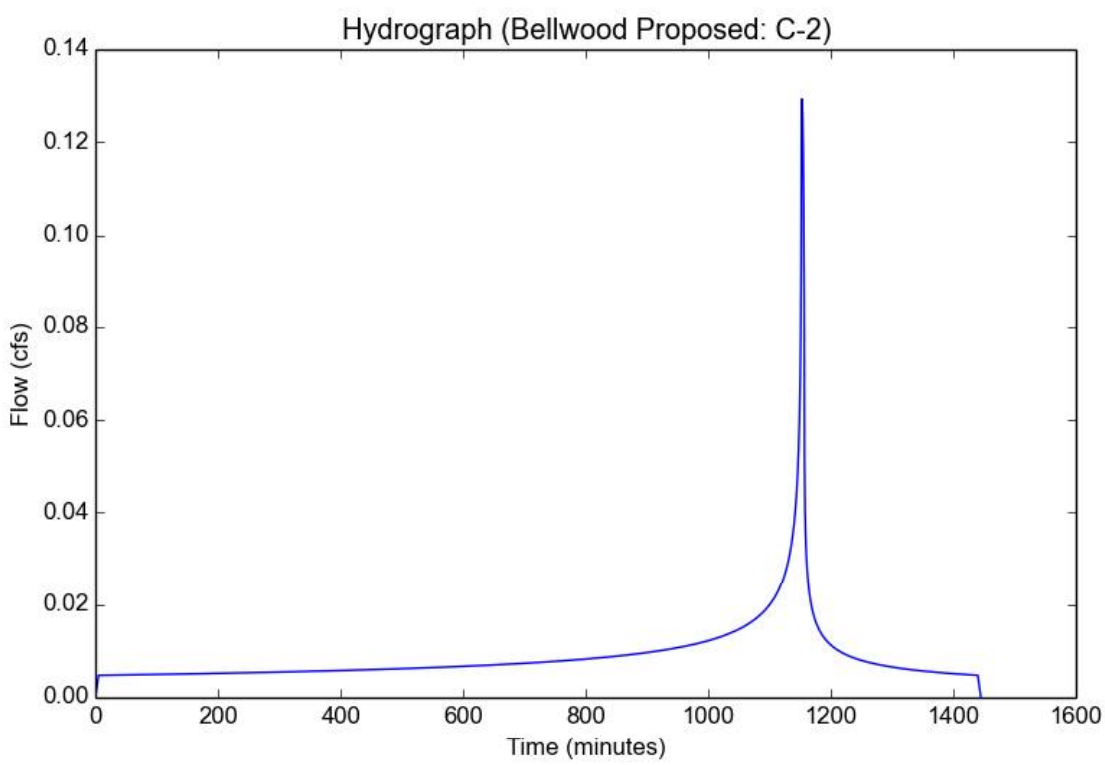
File location: F:/Projects/1755/001/_Support Files/Reports/Hydrology/Attachment H - Proposed Hydrocalc/Bellwood Proposed - C-2 -50yr.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Bellwood Proposed
Subarea ID	C-2
Area (ac)	0.04
Flow Path Length (ft)	360.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	6.02
Percent Impervious	0.99
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.02
Peak Intensity (in/hr)	3.5917
Undeveloped Runoff Coefficient (Cu)	0.9495
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.1293
Burned Peak Flow Rate (cfs)	0.1293
24-Hr Clear Runoff Volume (ac-ft)	0.0178
24-Hr Clear Runoff Volume (cu-ft)	773.9957



Appendix A.2

Notice of Preparation (NOP)

LOS ANGELES DEPARTMENT OF CITY PLANNING
221 North Figueroa St., Suite 1350
Los Angeles, CA 90012

NOTICE OF PREPARATION
OF ENVIRONMENTAL IMPACT REPORT AND PUBLIC SCOPING MEETING

June 12, 2019

ENVIRONMENTAL CASE NO.:	ENV-2018-7182-EIR
PROJECT NAME:	Senior Residential Community at The Bellwood
PROJECT APPLICANT:	SBLP Century City, LLC
PROJECT ADDRESS:	10328–10384 and 10341–10381 Bellwood Avenue, Los Angeles, CA 90064
COMMUNITY PLAN AREA:	West Los Angeles
COUNCIL DISTRICT:	5—Koretz
PUBLIC COMMENT PERIOD:	June 12, 2019 – July 12, 2019
SCOPING MEETING:	June 26, 2019, 5:00 P.M. – 7:00 P.M. See below for additional information.

The City of Los Angeles (City) intends to prepare an Environmental Impact Report (EIR) for the proposed Senior Residential Community at The Bellwood Project (Project). In accordance with Section 15082 of the California Environmental Quality Act (CEQA) Guidelines, the City has prepared this Notice of Preparation to provide the public, nearby residents and property owners, responsible agencies, and other interested parties with information regarding the Project and its potential environmental effects. The EIR will be prepared by outside consultants under the supervision of the City of Los Angeles, Department of City Planning.

The City requests your written comments as to the scope and contents of the EIR, including mitigation measures or project alternatives to reduce potential environmental impacts from the Project. Comments must be submitted in writing according to directions below. If you represent a public agency, the City seeks written comments as to the scope and content of the environmental information in the EIR that are germane to your agency's statutory responsibilities in connection with the Project. Your agency may need to use the EIR prepared by the City when considering your permit or other approval for the Project.

A Public Scoping Meeting will be held to receive input as to what environmental topics the EIR should study. No decisions about the Project are made at the Public Scoping Meeting. Additional project details, meeting information, and instructions for public comment submittal are listed below.

PROJECT LOCATION AND EXISTING ON-SITE USES: The Project Site encompasses a 2.22-acre (96,792 square-foot) site located at 10328–10384 and 10341–10381 Bellwood Avenue within the West Los Angeles Community Plan area of the City. The Project Site includes parcels located generally north/west and east/south of Bellwood Avenue as well as the portion of Bellwood Avenue that bifurcates the Project Site. The portion of the Project Site located generally north/west of Bellwood Avenue is bounded by a hotel to the north, Bellwood Avenue and multi-family residential uses to the east and south, and a small commercial shopping center to the west. The portion of the Project Site located east and south of Bellwood Avenue is generally bounded by a hotel and Bellwood Avenue to the north, single-family residential uses to the east and south, and a beauty salon to the west. The Project Site is currently developed with several multi-family residential buildings and associated structures and parking. **(See attached Project Location Map)**

PROJECT DESCRIPTION: The Project proposes the development of a new eldercare facility for persons 62 years of age and older on a 2.22-acre (96,792 square feet) site located at 10328-10384 and 10341-10381 Bellwood Avenue (Project Site) in the West Los Angeles Community Plan area of the City of Los Angeles (City). The Project Site includes the portion of Bellwood Avenue that bifurcates the Project Site. The Project would include 192 senior housing residential units, comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms; 50,463 square feet of indoor common areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area; and 14,630 square feet of outdoor common areas, including several courtyards and terraces that would be distributed throughout the Project Site. The proposed uses would be located within a single building ranging in height from 38 feet to 70 feet, or three to six stories. A total of 140 vehicle parking spaces would be provided within two subterranean levels beneath the proposed building. Three existing multi-family residential developments with a total of 112 residential units would be removed to accommodate the Project. Additionally, the Project includes the vacation and realignment of the portion of Bellwood Avenue that currently bifurcates the Project Site. The Project would comprise 241,754 square feet of floor area with a floor area ratio (FAR) of 2.66:1.; and would require the export of approximately 74,800 cubic yards of soil.

REQUESTED ACTIONS: The Applicant requests the following entitlements from the City of Los Angeles:

1. Pursuant to LAMC Section 14.3.1, an Eldercare Facility Unified Permit to permit an eldercare facility to be located on a lot within the R3-1 and C2-1VL Zones where the eldercare facility does not meet the use, area, height, and setback provisions of the Zones. Specifically, to permit the following:

    a. an eldercare facility use on the R3-zoned portion of the Project Site;

    b. density averaging across the Project Site;

    c. a maximum floor area ratio of 2.66:1 averaged across the Project Site;

    d. a maximum building height of 70 feet for a portion of the proposed building, in lieu of the 45 feet otherwise permitted in the R3-1 and C2-IVL Zones; and relief from transitional height limitations for the portions of the building located within the C2 Zone;

    e. over-in-height retaining walls (to be confirmed);

    f. the sale and service of alcoholic beverages as an accessory use to the operation of the eldercare facility (or pursuant to LAMC 12.24.W.1 as a conditional use approval); and

    g. access from a less restrictive zone to more restrictive zone for accessory uses such as parking.

2. Pursuant to LAMC Section 16.05 and 14.3.1.B, Site Plan Review for a development project consisting of 50 or more of net new residential dwelling units and/or guest rooms;

3. Pursuant to LAMC Sections 17.03 and 17.15, a Division of Land (Vesting Tentative Tract Map No. 82442) for the merger and resubdivision of the Project Site, merging all of the existing lots, including the merger of a portion of Bellwood Avenue; to designate yards such that the central northerly property line is designated as the front yard and the southernmost property line is designated as the rear yard and all other property lines would be designated as side yards; and a Haul Route Approval; and

4. Other discretionary and ministerial permits and approvals that may be deemed necessary, including, but not limited to, temporary street closure permits, grading permits, excavation permits, foundation permits, and building permits.

POTENTIAL ENVIRONMENTAL EFFECTS OF THE PROJECT: Based on an Initial Study, the Project could have potentially significant environmental impacts in the following topic areas, which will be addressed in the EIR: Aesthetics, Air Quality, Energy, Greenhouse Gas Emissions, Land Use and Planning, Noise, Population and Housing, Public Services (fire and police), Transportation, Tribal Cultural Resources, and Utilities and Service Systems (wastewater and water supply).

PUBLIC SCOPING MEETING: A Public Scoping Meeting will be held in **an open house format** to share information regarding the Project and the environmental review process and to receive written public comments regarding the scope and content of the environmental analysis to be addressed in the EIR. City staff, environmental consultants, and project representatives will be available, but no formal presentation is scheduled. You may stop by at any time during the hours listed below to view materials, ask questions, and provide written comments. The City encourages all interested individuals and organizations to attend this meeting. Written comments may be submitted, but there will be no verbal comments or public testimony taken at the Public Scoping Meeting. No decisions about the Project will be made at the Public Scoping Meeting. A separate public hearing for Municipal Code entitlement requests will be scheduled after the completion of the EIR. The date, time, and location of the Public Scoping Meeting are as follows:

Date:	June 26, 2019
Time:	5:00 p.m. – 7:00 p.m.
Location:	InterContinental Los Angeles Century City Hotel Grand Salon 3 and 4 2151 Avenue of the Stars Los Angeles, CA 90067

Free (hosted valet) parking will be available at the scoping meeting location

FILE REVIEW AND COMMENTS: The environmental file is available for public review at the City of Los Angeles, Department of City Planning, 221 N. Figueroa Street, Suite 1350, Los Angeles, CA 90012, during office hours Monday - Friday, 9:00 a.m. - 4:00 p.m. To review the file, please contact the Staff Planner listed below to schedule an appointment. A copy of this notice and the Initial Study prepared for the Project may be viewed with the environmental file or online at http://planning.lacity.org by clicking on the "Environmental Review" tab, then "Notice of Preparation & Public Scoping Meetings", and then clicking on the document links below the Project title.

The City will consider all written comments regarding the potential environmental impacts of the Project and issues to be addressed in the EIR. If you wish to submit comments, please reference the Environmental Case No. above, and submit them in writing by **July, 12, 2019 no later than 4:00 p.m**. Written comments will also be accepted at the Public Scoping Meeting described above.

Please direct your comments to:

Mail:	Adam Villani City of Los Angeles, Department of City Planning 221 N. Figueroa Street, Suite 1350 Los Angeles, CA 90012
E-mail:	adam.villani@lacity.org

ACCOMMODATIONS: As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability. The Public Scoping Meeting facility and its parking are wheelchair accessible. Sign language interpreters, assistive listening devices, or other auxiliary aids and/or services may be provided upon request. Other services, such as translation between English and other languages, may also be provided upon written request submitted a minimum of seven (7) working days in advance to: per.planning@lacity.org. Be sure to identify the language you need English to be translated into, and indicate if the request is for oral or written translation services. If translation of a written document is requested, please include the document to be translated as an attachment to your email.

VINCENT P. BERTONI, AICP
Director of Planning

FOR

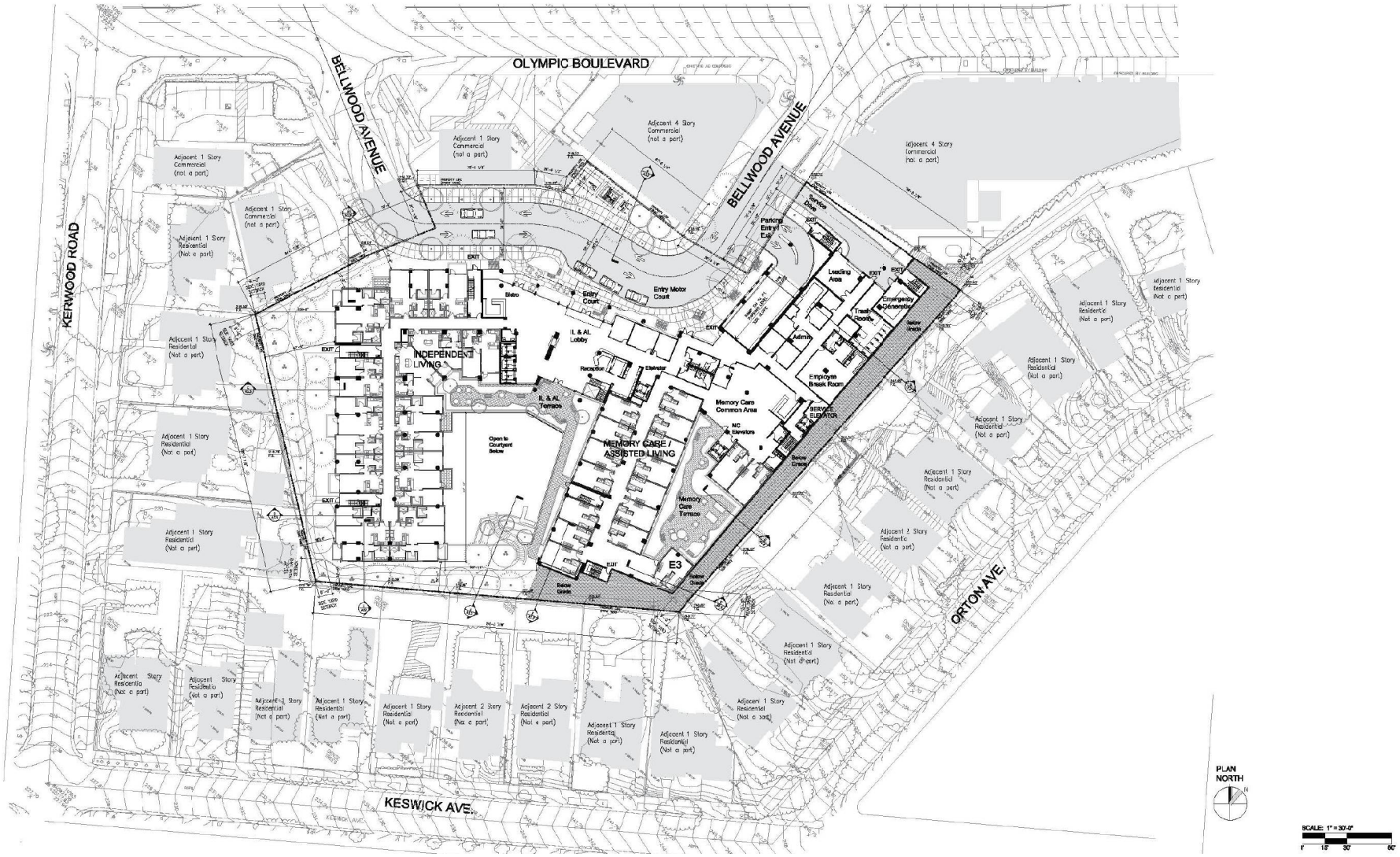
Adam Villani
Major Projects Section
Department of City Planning

Attachments:
Project Location Map
Conceptual Site Plan
Scoping Meeting Location Map

Puede obtener información en Español acerca de esta junta llamando al (213) 978-1300.

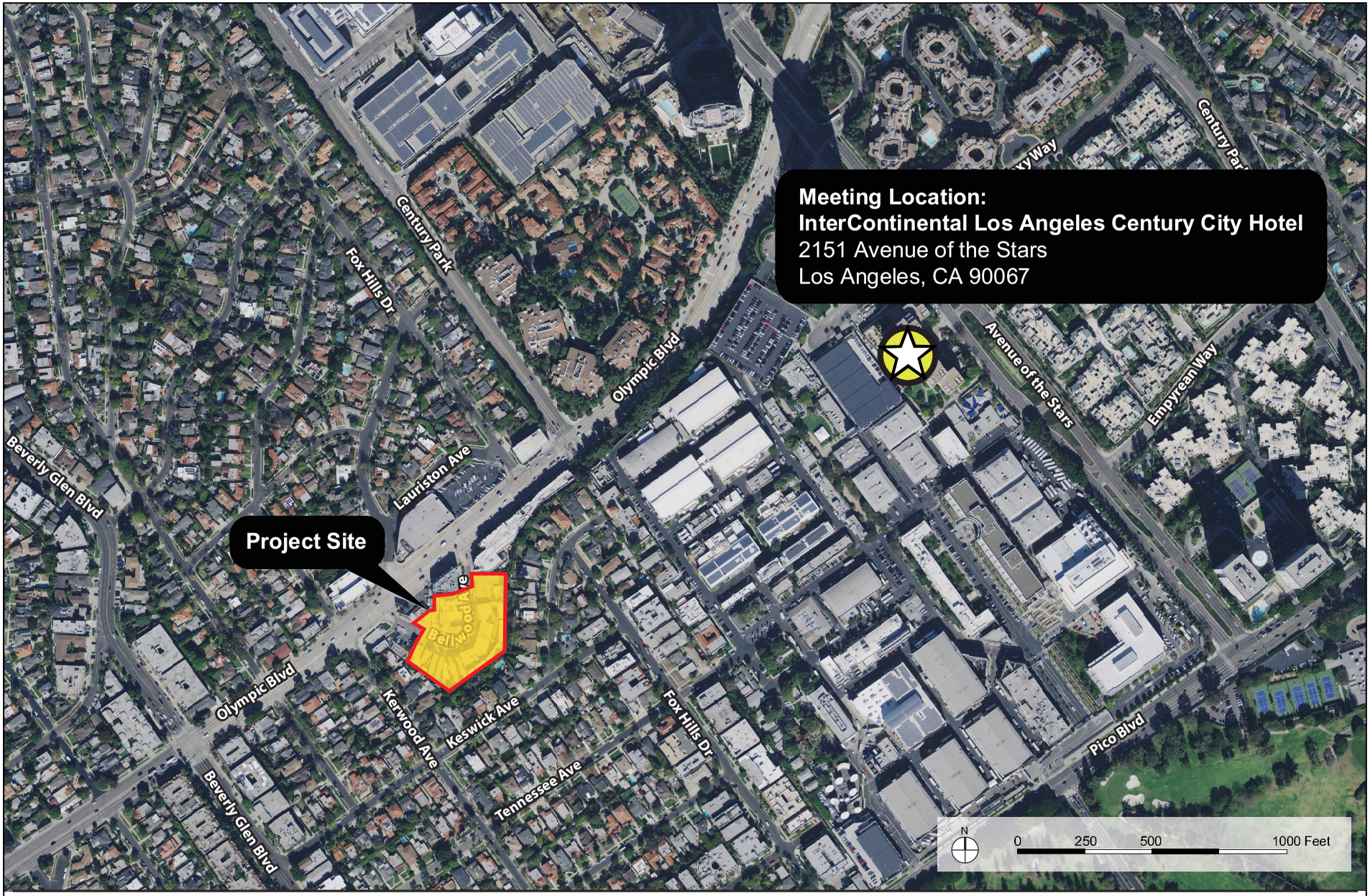
Project Location Map

Source: Google Maps, 2018.



Conceptual Site Plan

Source: Van Tilburg, Banvard & Soderbergh, AIA, 2018.



Scoping Meeting Location Map

Source: Apple Maps, 2019; Eyestone Environmental, 2019 .

Appendix A.3

NOP Comment Letters

DEPARTMENT OF TRANSPORTATION
DISTRICT 7 – OFFICE OF REGIONAL PLANNING
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 897-0673
FAX (213) 897-1337
www.dot.ca.gov

Making Conservation a California Way of Life.

July 11, 2019

Mr. Adam Villani
City of Los Angeles
221 N. Figueroa Street, Suite 1350
Los Angeles, California 90012

RE: Senior Residential Community
at The Bellwood
Notice of Preparation (NOP) for
a Draft Env. Impact Report
GTS#07-LA-2019-02565
Vic.: LA/ 405/ PM 30.136

Dear Mr. Villani:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The proposed project includes 192 senior housing residential units and would be located within a single building ranging in height from 38 feet to 70 feet. A total of 140 vehicle parking spaces would be provided in two subterranean parking levels beneath the proposed building. The proposed project would comprise 241,754 square feet of floor area.

The nearest State facility to the proposed project is SR-2 and I-405. In the proposed project's Initial Study checklist, Transportation section indicated that "…increase in the use of the area's transportation facilities could conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system,…Therefore, further analysis of this issue will be provided in the EIR." Caltrans looks forward to receiving the EIR for review and provide further comments, if warranted. In addition, for construction traffic, if it is expected to cause delays on the State facility, please submit a truck/traffic construction management plan for Caltrans' review.

The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. Senate Bill 743 (2013) mandated that CEQA review of transportation impacts of proposed development be modified by using Vehicle Miles Traveled (VMT) as the primary metric in identifying transportation impacts for all future development projects. Please reference to The Governor's Office of Planning and Research (OPR) for more information: http://opr.ca.gov/ceqa/updates/guidelines/.

Caltrans supports the implementation of complete streets and pedestrian safety measures such as road diets and other traffic calming measures. Please note the Federal Highway Administration (FHWA) recognizes the road diet treatment as a proven safety countermeasure, and the cost of a road diet can be significantly reduced if implemented in tandem with routine street resurfacing.

Caltrans encourage the Lead Agency to integrate transportation and land use in a way that reduces Vehicle Miles Traveled (VMT) and Greenhouse Gas (GHG) emissions by facilitating the provision of more proximate goods and services to shorten trip lengths, and achieve a high level of non-motorized travel and transit use. We also encourage the Lead Agency to evaluate the potential of Transportation Demand Management (TDM) strategies and Intelligent Transportation System (ITS) applications in order to better manage the transportation network, as well as transit service and bicycle or pedestrian connectivity improvements.

The Department also seeks to provide equitable mobility options for people who are economically, socially, or physically disadvantaged. Therefore, we ask the Lead Agency to evaluate the project site for access problem, VMT and service needs that may need to be addressed.

For additional TDM options, please refer to the Federal Highway Administration's *Integrating Demand Management into the Transportation Planning Process: A Desk Reference* (Chapter 8). The reference is available online at:
http://www.ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf

As a reminder, transportation of heavy construction equipment and/or materials, which requires the use of oversized-transport vehicles on State highways, will require a Caltrans transportation permit. Caltrans recommends that large size truck trips be limited to off-peak commute periods.

Storm water run-off is a sensitive issue for Los Angeles and Ventura counties. Please be mindful that project needs to be designed to discharge clean run-off water.

If you have any questions regarding these comments, please contact project coordinator, Frances Duong, at (213) 897-0673, or at frances.duong@dot.ca.gov, and refer to GTS# 07-LA-2019-02565.

Sincerely,

MIYA EDMONSON
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

From: **Lijin Sun** <LSun@aqmd.gov>
Date: Tue, Jul 2, 2019 at 7:05 AM
Subject: South Coast AQMD Staff NOP Comments for the Senior Residential Community at The Bellwood
To: adam.villani@lacity.org <adam.villani@lacity.org>

Dear Mr. Villani,

Attached are South Coast AQMD staff's comments on the Notice of Preparation of Environmental Impact Report for the Senior Residential Community at The Bellwood (South Coast AQMD Control Number: LAC190613-02). The original, electronically signed letter will be forwarded to your attention by regular USPS mail. Please contact me if you have any questions regarding these comments.

Thank you,

Lijin Sun, J.D.
Program Supervisor, CEQA IGR
South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765
Direct: (909) 396-3308
Fax: (909) 396-3324

Please note that the South Coast AQMD is closed on Mondays.

LAC190613-02 NOP
Senior Residential C

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA USPS AND E-MAIL: July 2, 2019
adam.villani@lacity.org
Adam Villani, City Planner
City of Los Angeles, Planning Department
221 N. Figueroa Street, Suite 1350
Los Angeles, CA 90012

Notice of Preparation of Environmental Impact Report for the Proposed Senior Residential Community at The Bellwood[1]

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. South Coast AQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the Proposed Project that should be included in the Environmental Impact Report (EIR). Please send South Coast AQMD a copy of the EIR upon its completion. Note that copies of the EIR that are submitted to the State Clearinghouse are not forwarded to South Coast AQMD. Please forward a copy of the EIR directly to South Coast AQMD at the address shown in the letterhead. **In addition, please send with the EIR all appendices or technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files[2]. These include emission calculation spreadsheets and modeling input and output files (not PDF files). Without all files and supporting documentation, South Coast AQMD staff will be unable to complete our review of the air quality analyses in a timely manner. Any delays in providing all supporting documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

South Coast AQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. South Coast AQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from South Coast AQMD's Subscription Services Department by calling (909) 396-3720. More guidance developed since this Handbook is also available on South Coast AQMD's website at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). South Coast AQMD staff also recommends that the Lead Agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

South Coast AQMD has also developed both regional and localized significance thresholds. South Coast AQMD staff requests that the Lead Agency quantify criteria pollutant emissions and compare the results to South Coast AQMD's CEQA regional pollutant emissions significance thresholds to determine air

[1] The Proposed Project consists of construction of a 241,754-square-foot building with 192 senior residential units on 2.22 acres.
[2] Pursuant to the CEQA Guidelines Section 15174, the information contained in an EIR shall include summarized technical data, maps, plot plans, diagrams, and similar relevant information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public. Placement of highly technical and specialized analysis and data in the body of an EIR should be avoided through inclusion of supporting information and analyses as appendices to the main body of the EIR. Appendices to the EIR may be prepared in volumes separate from the basic EIR document, but shall be readily available for public examination and shall be submitted to all clearinghouses which assist in public review.

quality impacts. South Coast AQMD's CEQA regional pollutant emissions significance thresholds can be found here at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf. In addition to analyzing regional air quality impacts, South Coast AQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LSTs can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the Proposed Project, it is recommended that the Lead Agency perform a localized analysis by either using the LSTs developed by South Coast AQMD staff or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the Proposed Project and all air pollutant sources related to the Proposed Project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis.

In the event that the Proposed Project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the Lead Agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Health Perspective*, which can be found at: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. Guidance[3] on strategies to reduce air pollution exposure near high-volume roadways can be found at: https://www.arb.ca.gov/ch/rd_technical_advisory_final.PDF.

Mitigation Measures

In the event that the Proposed Project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize these impacts. Pursuant to CEQA Guidelines Section 15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying potential mitigation measures for the Proposed Project, including:

[3] In April 2017, CARB published a technical advisory, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory*, to supplement CARB's Air Quality and Land Use Handbook: A Community Health Perspective. This technical advisory is intended to provide information on strategies to reduce exposures to traffic emissions near high-volume roadways to assist land use planning and decision-making in order to protect public health and promote equity and environmental justice. The technical advisory is available at: https://www.arb.ca.gov/ch/landuse.htm.

- Chapter 11 "Mitigating the Impact of a Project" of South Coast AQMD'S *CEQA Air Quality Handbook* South Coast AQMD's CEQA web pages available here: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies
- South Coast AQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions and Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities
- South Coast AQMD's Mitigation Monitoring and Reporting Plan (MMRP) for the 2016 Air Quality Management Plan (2016 AQMP) available here (starting on page 86): http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-mar3-035.pdf
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

Alternatives

In the event that the Proposed Project generates significant adverse air quality impacts, CEQA requires the consideration and discussion of alternatives to the project or its location which are capable of avoiding or substantially lessening any of the significant effects of the project. The discussion of a reasonable range of potentially feasible alternatives, including a "no project" alternative, is intended to foster informed decision-making and public participation. Pursuant to CEQA Guidelines Section 15126.6(d), the EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project.

Permits

If implementation of the Proposed Project requires a permit from South Coast AQMD, South Coast AQMD should be identified as a Responsible Agency for the Proposed Project in the EIR. For more information on permits, please visit South Coast AQMD's webpage at: http://www.aqmd.gov/home/permits. Questions on permits can be directed to South Coast AQMD's Engineering and Permitting staff at (909) 396-3385.

Data Sources

South Coast AQMD rules and relevant air quality reports and data are available by calling South Coast AQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available at South Coast AQMD's webpage at: http://www.aqmd.gov.

South Coast AQMD staff is available to work with the Lead Agency to ensure that project's air quality and health risk impacts are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at lsun@aqmd.gov.

Sincerely,

Lijin Sun

Lijin Sun, J.D.
Program Supervisor, CEQA IGR
Planning, Rule Development & Area Sources

LS
LAC190613-02
Control Number

FORM GEN. 160 (Rev. 8-12)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

DATE: July 11, 2019

TO: Vincent P. Bertoni, Director of Planning
Department of City Planning

Attn: Adam Villani, City Planner
Department of City Planning

FROM: Ali Poosti, Division Manager
Wastewater Engineering Services Division
LA Sanitation and Environment

SUBJECT: SENIOR RESIDENTIAL COMMUNITY AT THE BELLWOOD - NOTICE OF PREPARATION OF ENVIRONMENTAL IMPACT REPORT AND PUBLIC SCOPING MEETING

This is in response to your June 12, 2019 letter requesting a review of the proposed eldercare facility located at 10328-10384 and 10341-10381 Bellwood Ave, Los Angeles, CA 90064. The project will consist of senior independent units, assisted living and memory care guest rooms, indoor common and outdoor common areas. LA Sanitation has conducted a preliminary evaluation of the potential impacts to the wastewater and stormwater systems for the proposed project.

WASTEWATER REQUIREMENT

LA Sanitation, Wastewater Engineering Services Division (WESD) is charged with the task of evaluating the local sewer conditions and to determine if available wastewater capacity exists for future developments. The evaluation will determine cumulative sewer impacts and guide the planning process for any future sewer improvement projects needed to provide future capacity as the City grows and develops.

Projected Wastewater Discharges for the Proposed Project:

Type Description	Average Daily Flow per Type Description (GPD/UNIT)	Proposed No. of Units	Average Daily Flow (GPD)
Proposed			
Senior Independent Units	110 GPD/ DU	71 DU	7,810
Assisted Living Guest Rooms	110 GPD/ DU	75 DU	8,250
Memory Care Guest Rooms	110 GPD/ DU	46 DU	5,060
Indoor Common Area	50 GPD/1000 SQ.FT	50,463 SQ.FT	2,523
Outdoor Common Area	50 GPD/1000 SQ.FT	14,630 SQ.FT	732
Indoor Swimming Pool	16,458 GAL/UNIT	1 UNIT	16,458
Indoor Spa	1,908 GAL/UNIT	1 UNIT	1,908
Total			**42,741 GPD**

SEWER AVAILABILITY

The sewer infrastructure in the vicinity of the proposed project includes an existing 8-inch line on Bellwood Ave. The sewage from the existing 8-inch line feeds into a 12-inch line on Olympic Blvd. The sewage from the existing 12-inch line feeds into an 18-inch line on Tennessee Ave. The sewage from the existing 18-inch line feeds into a 27-inch line on Tennessee Ave before discharging into a 42-inch sewer line on Manning Ave. Figure 1 shows the details of the sewer system within the vicinity of the project. The current flow levels (d/D) in the 8-inch line, 12-inch line, and 18-inch line cannot be determined at this time without additional gauging.

The current approximate flow level (d/D) and the design capacities at d/D of 50% in the sewer system are as follows:

Pipe Diameter (in)	Pipe Location	Current Gauging d/D (%)	50% Design Capacity
8	Bellwood Ave	*	475,534 GPD
12	Olympic Blvd	*	1.07 MGD
18	Tennessee Ave	*	1.89 MGD
27	Tennessee Ave	30	7.20 MGD
42	Manning Ave	27	20.25 MGD

* No gauging available

Based on the estimated flows, it appears the sewer system might be able to accommodate the total flow for your proposed project. Further detailed gauging and evaluation will be needed as part of the permit process to identify a specific sewer connection point. If the public sewer has insufficient capacity, then the developer will be required to build sewer lines to a point in the sewer system with sufficient capacity. Any sewer ejector shall be reviewed by LASAN staff prior to City of Los Angeles Department of Building and Safety (LADBS) approval. A final approval for sewer capacity and connection permit will be made at that time. Ultimately, this sewage flow will be conveyed to the Hyperion Water Reclamation Plant, which has sufficient capacity for the project.

If you have any questions, please call Christopher DeMonbrun at (323) 342-1567 or email at chris.demonbrun@lacity.org.

STORMWATER REQUIREMENTS

LA Sanitation, Watershed Protection Program (WPP) is charged with the task of ensuring the implementation of the Municipal Stormwater Permit requirements within the City of Los Angeles. We anticipate the following requirements would apply for this project.

POST-CONSTRUCTION MITIGATION REQUIREMENTS

In accordance with the Municipal Separate Storm Sewer (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (Order No. R4-2012-0175, NPDES No. CAS004001) and

the City of Los Angeles Stormwater and Urban Runoff Pollution Control requirements (Chapter VI, Article 4.4, of the Los Angeles Municipal Code), the Project shall comply with all mandatory provisions to the Stormwater Pollution Control Measures for Development Planning (LID Ordinance) and as it may be subsequently amended or modified. Prior to issuance of grading or building permits, the Applicant shall submit a LID Plan to the City of Los Angeles, Bureau of Sanitation, Watershed Protection Division (WPD), for review and approval. The LID Plan shall be prepared consistent with the requirements of the Development Best Management Practices Handbook.

Current regulations prioritize infiltration, capture/use, and then biofiltration as the preferred stormwater control measures. The relevant documents can be found at: www.lacitysan.org. It is advised that input regarding LID requirements be received in the early phases of the project from WPD's plan-checking staff.

GREEN STREETS

The City is developing a Green Street Initiative that will require projects to implement Green Street elements in the parkway areas between the roadway and sidewalk of the public right-of-away to capture and retain stormwater and urban runoff to mitigate the impact of stormwater runoff and other environmental concerns. The goals of the Green Street elements are to improve the water quality of stormwater runoff, recharge local ground water basins, improve air quality, reduce the heat island effect of street pavement, enhance pedestrian use of sidewalks, and encourage alternate means of transportation. The Green Street elements may include infiltration systems, biofiltration swales, and permeable pavements where stormwater can be easily directed from the streets into the parkways and can be implemented in conjunction with the LID requirements. Green Street standard plans can be found at: www.eng2.lacity.org/techdocs/stdplans/

CONSTRUCTION REQUIREMENTS

All construction sites are required to implement a minimum set of BMPs for erosion control, sediment control, non-stormwater management, and waste management. In addition, construction sites with active grading permits are required to prepare and implement a Wet Weather Erosion Control Plan during the rainy season between October 1 and April 15. Additionally, construction sites that disturb more than one-acre of land are subject to the NPDES Construction General Permit issued by the State of California, and are required to prepare, submit, and implement the Storm Water Pollution Prevention Plan (SWPPP).

If there are questions regarding the stormwater requirements, please call WPP's plan-checking counter at (213) 482-7066. WPD's plan-checking counter can also be visited at 201 N. Figueroa, 3rd Fl, Station 18.

GROUNDWATER DEWATERING REUSE OPTIONS

The Los Angeles Department of Water and Power (LADWP) is charged with the task of supplying water and power to the residents and businesses in the City of Los Angeles. One of the sources of water includes groundwater. The majority of groundwater in the City of Los Angeles is adjudicated, and the rights of which are owned and managed by various parties. Extraction of groundwater within the City from any depth by law requires metering and regular reporting to the appropriate Court-appointed Watermaster. LADWP facilitates this reporting process, and may assess and collect associated fees for the usage of the City's water rights. The party performing the dewatering should inform the property owners about the reporting requirement and associated usage fees.

On April 22, 2016 the City of Los Angeles Council passed Ordinance 184248 amending the City of Los Angeles Building Code, requiring developers to consider beneficial reuse of groundwater as a conservation measure and alternative to the common practice of discharging groundwater to the storm drain (SEC. 99.04.305.4). It reads as follows: "Where groundwater is being extracted and discharged, a system for onsite reuse of the groundwater, shall be developed and constructed. Alternatively, the groundwater may be discharged to the sewer."

Groundwater may be beneficially used as landscape irrigation, cooling tower make-up, and construction (dust control, concrete mixing, soil compaction, etc.). Different applications may require various levels of treatment ranging from chemical additives to filtration systems. When onsite reuse is not available the groundwater may be discharged to the sewer system. This allows the water to be potentially reused as recycled water once it has been treated at a water reclamation plant. If groundwater is discharged into the storm drain it offers no potential for reuse. The onsite beneficial reuse of groundwater can reduce or eliminate costs associated with sewer and storm drain permitting and monitoring. Opting for onsite reuse or discharge to the sewer system are the preferred methods for disposing of groundwater.

To help offset costs of water conservation and reuse systems, LADWP offers the Technical Assistance Program (TAP), which provides engineering and technical assistance for qualified projects. Financial incentives are also available. Currently, LADWP provides an incentive of $1.75 for every 1,000 gallons of water saved during the first two years of a five-year conservation project. Conservation projects that last 10 years are eligible to receive the incentive during the first four years. Other water conservation assistance programs may be available from Metropolitan Water District of Southern California. To learn more about available water conservation assistance programs, please contact LADWP Rebate Programs 1-888-376-3314 and LADWP TAP 1-800-544-4498, selection "3".

For more information related to beneficial reuse of groundwater, please contact Greg Reed, Manager of Water Rights and Groundwater Management, at (213)367-2117 or greg.reed@ladwp.com.

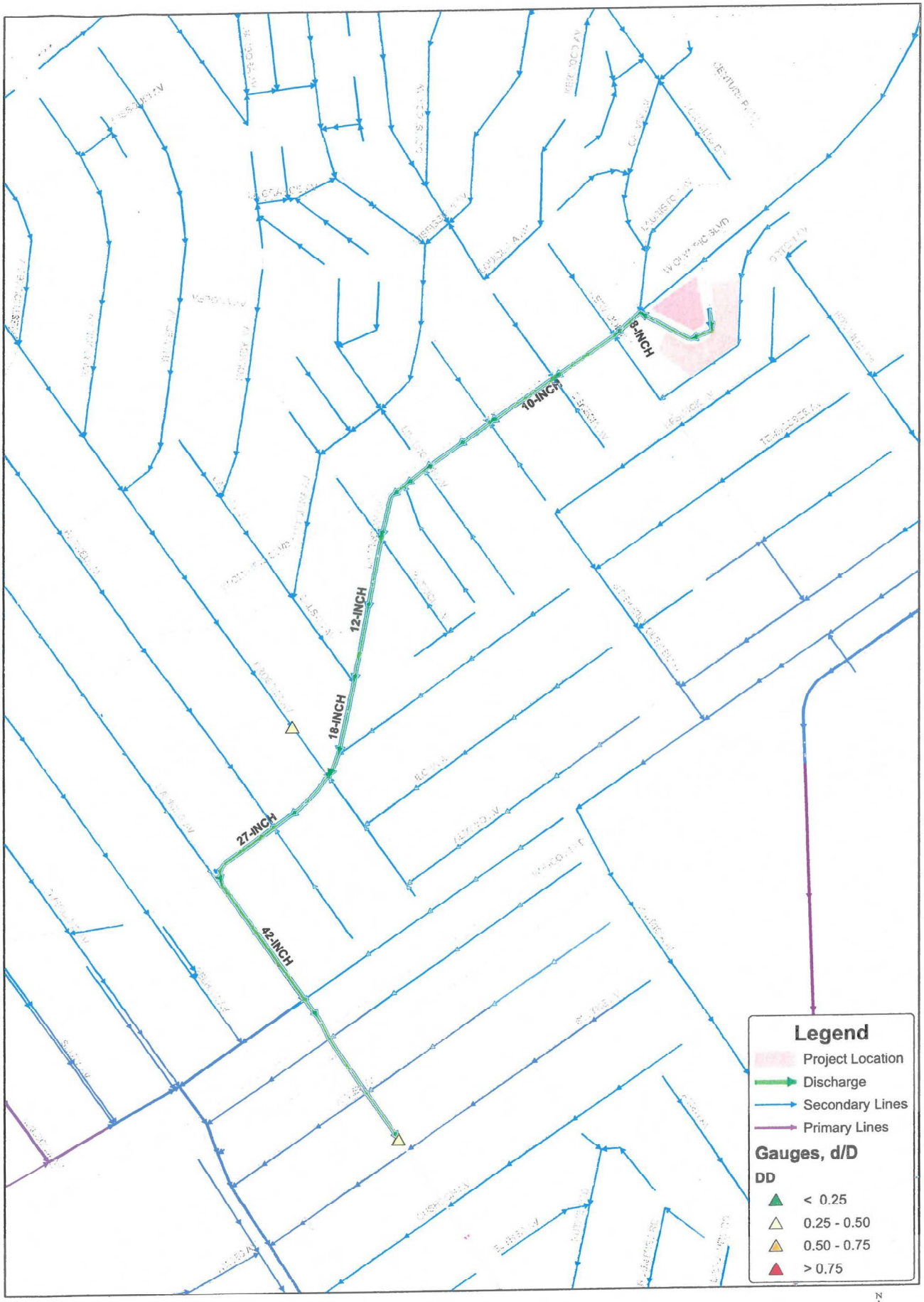
SOLID RESOURCE REQUIREMENTS

The City has a standard requirement that applies to all proposed residential developments of four or more units or where the addition of floor areas is 25 percent or more, and all other development projects where the addition of floor area is 30 percent or more. Such developments must set aside a recycling area or room for onsite recycling activities. For more details of this requirement, please contact LA Sanitation Solid Resources Recycling hotline 213-922-8300.

AP/CD: ra

Attachment: Figure 1 - Sewer Map

c: Kosta Kaporis, LASAN
Cyrous Gilani, LASAN
Christopher DeMonbrun, LASAN



Wastewater Engineering Services Division
Bureau of Sanitation
City of Los Angeles

Figure 1
SENIOR RESIDENTIAL COMMUNITY AT THE BELLWOOD
Sewer Map

N W E S

0 125 250 500 750 1,000 Feet

Thomas Brother Data reproduced with permission granted by THOMAS BROS MAP

ENVIRONMENTAL ISSUES & IMPACTS

What key issues or potential impacts of concern should be analyzed in the Environmental Impact Report?

- ☐ Aesthetics
- ☐ Agriculture and Forest Resources
- ☐ Air Quality
- ☐ Biological Resources
- ☒ Cultural Resources
- ☐ Geology and Soils
- ☐ Greenhouse Gas Emissions
- ☐ Hazards and Hazardous Materials
- ☐ Hydrology/Water Quality
- ☒ Land Use and Planning
- ☐ Mineral Resources
- ☐ Noise
- ☒ Population and Housing
- ☒ Public Services
- ☒ Recreation
- ☒ Traffic/Transportation
- ☐ Tribal Cultural Resources
- ☐ Utilities/Service Systems

Note: Any identifying information provided will become part of the public record and, as such, must be released to any individual upon request.

Written Comment Form

Use the space below to comment on areas of concern regarding the scope and content of the Draft EIR, and offer potential alternatives and/or measures to avoid or reduce environmental impacts.

I live very close to this proposed project and in general am in support of having a quality retirement center in the neighborhood. My wife and I have lived in the neighborhood for 6 years and plan on staying. Both my wife and I have parents in their 70's and each have a parent that has been diagnosed with early stage Dimensia so this project has a personal interest to both of us.

As far as concerns, my main concern is the dangerous speed of traffic in that area. Makeing a left going west on Olympic should be addressed, very dangerous.

CONTACT INFORMATION (Optional, please print clearly)

Name: Lance Bowling Representing Agency or Organization: _____

Address: 2031 S. Beverly Glen City/State/Zip: Los Angeles CA 90025

ENVIRONMENTAL ISSUES & IMPACTS

What key issues or potential impacts of concern should be analyzed in the Environmental Impact Report?

- ☐ Aesthetics
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Written Comment Form

Use the space below to comment on areas of concern regarding the scope and content of the Draft EIR, and offer potential alternatives and/or measures to avoid or reduce environmental impacts.

I LIKE THE ADDITIONAL TREES + GREEN ROOF TOPS. BY THE TIME THIS PROJECT IS APPROVED + BUILT, THERE WILL BE A NEED FOR ATLEAST 2-3 OTHER ADDITIONAL PROJECTS IN THE AREA TO HELP ENSURE OLDER MEMBERS OF THE AREA WILL BE ABLE TO STAY CLOSE TO WHERE THEY AND FAMILY MEMBERS LIVE. I WOULD HOPE AND EXPECT A NOISE REDUCTION OF TRAFFIC ON OLYMPIC. I DO NOT SEE OR EXPECT MUCH OF AN UPTICK IN EMERGENCY SERVICES. SINCE I WOULD HOPE RESIDENTS THAT CURRENTY RESIDE LOCALLY WILL BE GIVEN FIRST CHOICE OR OPTION OF MOVING INTO FACILITY.

CONTACT INFORMATION (Optional, please print clearly)

Name: WILLIAM HOUSTON Representing Agency or Organization: —

Address: 10331 ALMAYO AVE City/State/Zip: L.A. CA 90064

ENVIRONMENTAL ISSUES & IMPACTS

What key issues or potential impacts of concern should be analyzed in the Environmental Impact Report?

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Written Comment Form

Use the space below to comment on areas of concern regarding the scope and content of the Draft EIR, and offer potential alternatives and/or measures to avoid or reduce environmental impacts.

(1) Project Height - Any height over 3 Stories will block our view due west (Santa Monica). We leave in 3 Story houses and we have this view from 3rd floor. All those houses toward the end of Orton ave (close to Fox Studio) are 2-3 stories, and some with terrace or patios, which have views toward west & north. The proposed project with 4-5 Stories are not acceptable. All those property owners described above purchased thier properties mostly for the view as well as low traffic on Orton Ave.

Orton Ave. sits approximately two stories above Olympic Blvd.

CONTACT INFORMATION (Optional, please print clearly)

Name: Robie Rahmani Representing Agency or Organization: adjacent Property

Address: 10301 Orton Ave City/State/Zip: LA 90064

ENVIRONMENTAL ISSUES & IMPACTS

What key issues or potential impacts of concern should be analyzed in the Environmental Impact Report?

- ☐ Aesthetics
- ☐ Agriculture and Forest Resources
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Written Comment Form

Use the space below to comment on areas of concern regarding the scope and content of the Draft EIR, and offer potential alternatives and/or measures to avoid or reduce environmental impacts.

(2) Traffic Study.

- The project is unique in this area. Suggest that another senior housing similar to proposed site to be studied for traffic generation (in-out) and during peak hours.
- Intersections of Bellwood & Olympic (two) have off set with the streets to the north of Olympic. The intersection are both off-set by approximately 100'-120'. Drivers on Olympic trying to make left turns have conflicts with other left turners from other direction. Any additional traffic generated by this project would increase the accident pattern @ these two intersections.

CONTACT INFORMATION (Optional, please print clearly)

Name: Rabie Rahmani Representing Agency or Organization: adjacent property

Address: 10301 Orton Ave City/State/Zip: LA, Ca 90064

ENVIRONMENTAL ISSUES & IMPACTS

What key issues or potential impacts of concern should be analyzed in the Environmental Impact Report?

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- ☐ Utilities/Service Systems

Note: Any identifying information provided will become part of the public record and, as such, must be released to any individual upon request.

Written Comment Form

Use the space below to comment on areas of concern regarding the scope and content of the Draft EIR, and offer potential alternatives and/or measures to avoid or reduce environmental impacts.

(3) Noise Pollision

This project (Senior housing) will ~~[illegible]~~ cause ~~[illegible]~~ traffic generated by fire trucks, ambulances + Police (911). The ~~[illegible]~~ Sirens and noise caused by these vehicles will echo ~~[illegible]~~ the buildings across and bounce back toward the houses in the ~~[illegible]~~ back. We already have lots of noise from Olympic Blvd., but we all knew what we are getting into when we purchased our properties.

CONTACT INFORMATION (Optional, please print clearly)

Name: Robie Rahmoni Representing Agency or Organization: adjacent property

Address: 10301 Orton Ave City/State/Zip: LA 90064

ENVIRONMENTAL ISSUES & IMPACTS

What key issues or potential impacts of concern should be analyzed in the Environmental Impact Report?

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- ❑ Utilities/Service Systems

Note: Any identifying information provided will become part of the public record and, as such, must be released to any individual upon request.

Written Comment Form

Use the space below to comment on areas of concern regarding the scope and content of the Draft EIR, and offer potential alternatives and/or measures to avoid or reduce environmental impacts.

The proposed project will creat noise from emergency cars, Paramedics, fire department.
The proposed project, Senior Residential community, will creat ~~noise~~ nuisance as the the emergency cars called to the Senior Residential will creat a lot of noise.

CONTACT INFORMATION (Optional, please print clearly)

Name: _____ Representing Agency or Organization: _____

Address: _____ City/State/Zip: _____

CITY OF LOS ANGELES
PUBLIC SCOPING MEETING
SENIOR RESIDENTIAL COMMUNITY AT THE BELLWOOD
JUNE 26, 2019

Please include your mailing address if you wish to receive future notices regarding this case, including publication of the Draft EIR and Final EIR.

Name	Address	Email	Organization (if any)
William Houston Please print	10331 ALMAYO AVE	EXECUTIVEBILL@AOL.CO	
Lance Bowling Please print	2031 S. Beverly Glen	lance@Michaelsongroup.com	
TAKASHI OHARA Please print	10390 Bellwood LA 90064		
Marjorie Masters Please print	10329 Orton Ave	MLMMWR@aol.com	
HAZEL BOND Please print	10333 KESWICK AVE	hazelbond@MAC.COM	
Rabie + Stella Rahmani Please print	10301 Orton Ave	rabierahmani@ymail.com Stellarafiei@att.net	
HAGU SOLOMON CARY Please print	200 N SPRING ST.		CD5
Please print			
Please print			
Please print			
Please print			

CITY OF LOS ANGELES
PUBLIC SCOPING MEETING
SENIOR RESIDENTIAL COMMUNITY AT THE BELLWOOD
JUNE 26, 2019

Please include your mailing address if you wish to receive future notices regarding this case, including publication of the Draft EIR and Final EIR.

Name	Address	Email	Organization (if any)
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Appendix B

Aesthetics Tables

Appendix B

Aesthetics Tables

Table 1
Applicable Goals, Objectives, and Policies of the General Plan

Goal/Objective/Policy	Would the Project Conflict?
General Plan Framework Element Land Use Chapter (Chapter 3)	
Policy 3.7.4: Improve the quality of new multi-family dwelling units based on the standards in Chapter 5 Urban Form and Neighborhood Design Chapter of this Element.	**No Conflict.** As described in Section II, Project Description, of this Draft EIR, the three existing multi-family residential developments within the Project Site would be removed and replaced with a senior housing development providing new housing units for the City's aging senior population. As provided below and in Section IV.E, Land Use and Planning, of this Draft EIR, the Project would be consistent with applicable standards in the Urban Form and Neighborhood Design Chapter as well as the more updated Citywide Design Guidelines. Therefore, the Project would not conflict with this policy.
General Plan Framework Element Housing Chapter (Chapter 4)	
Objective 4.3: Conserve scale and character of residential neighborhoods.	**No Conflict.** The Project Site is bounded by the Courtyard by Marriott hotel (approximately four stories and 54 feet in height), and the Century Park hotel (approximately four stories and 58 feet in height) to the north; a small commercial shopping center that includes a cleaners and a smog check station, and a beauty salon to the west; and single-family residential uses to the east and to the south. The Project would feature a contemporary architectural style with a new building designed to complement the existing surrounding uses and respond to the low- to mid-scale character of the surrounding area. The proposed building would include building fenestration, a variety of surface materials, and a stepped design to create horizontal and vertical articulation, provide visual interest, and maintain the existing scale in the vicinity of the Project Site. In particular, building scale and massing would be defined by varying massing and height components that break up the façade into distinct and offset planes. Specifically, the building is designed so that the six-story portion is located nearest the commercial uses and four-story hotels to the north. The building would step down in height as it nears the southerly and westerly property lines nearest the residential uses. The easterly side of the building would include a landscaped rooftop terrace at the level nearest the residential uses to the east.

Table 1 (Continued)
Applicable Goals, Objectives, and Policies of the General Plan

Goal/Objective/Policy	Would the Project Conflict?
General Plan Framework Element Urban Form and Neighborhood Design Chapter (Chapter 5)	
Objective 5.5: Enhance the livability of all neighborhoods by upgrading the quality of development and improving the quality of the public realm.	**No Conflict.** As described in Section II, Project Description, of this Draft EIR, the Project would replace the three existing multi-family residential developments within the Project Site with a new eldercare facility that would complement the uses surrounding the Project Site. The Project would feature a contemporary architectural style and would be designed to create a visually unified site with a new building designed to complement the existing surrounding uses and respond to the low- to mid-scale character of the surrounding area. In addition, the Project would realign the portion of Bellwood Avenue that bisects the Project Site and enhance the sidewalks and provide additional street trees. Therefore, the Project would upgrade the quality of development and improve the quality of the public realm.
Policy 5.8.4: Encourage that signage be designed to be integrated with the architectural character of the buildings and convey a visually attractive character.	**No Conflict.** Proposed signage would be designed to be aesthetically compatible with the architecture of the Project and the surrounding area. Proposed signage would include mounted project identity signage and general wayfinding signage, which would be integrated with the proposed building and comply with the requirements of the LAMC. Wayfinding signs would be located at parking garage entrances, elevator lobbies, vestibules, and residential corridors.
General Plan Framework Element Infrastructure and Public Services Chapter (Chapter 9)	
Goal 9P: Appropriate lighting required to: (1) provide for nighttime vision, visibility, and safety needs on streets, sidewalks, parking lots, transportation, recreation, security, ornamental, and other outdoor locations; (2) provide appropriate and desirable regulation of architectural and informational lighting such as building façade lighting or advertising lighting; and (3) protect and preserve the nighttime environment, views, driver visibility, and otherwise minimize or prevent light pollution, light trespass, and glare.	**No Conflict.** The Project would provide appropriate lighting for nighttime vision, visibility, and safety needs throughout the Project Site, including outdoor locations, pedestrian pathways, and the two subterranean parking levels below the building. Night lighting would be low profile and at the necessary intensity to provide a safe environment. Sufficient lighting would also be provided in the subterranean parking levels to maximize visibility and reduce areas of concealment. Any terrace lighting would be directed downward towards walkable surfaces and shielded from view of the adjacent residential neighbors and comply with applicable City regulations. All new street and pedestrian lighting within the public right-of-way would comply with applicable City regulations and would require approval from the Bureau of Street Lighting in order to maintain appropriate and safe lighting levels on sidewalks and roadways while minimizing light and glare on adjacent properties. The Project would protect and preserve the nighttime environment and driver visibility, and otherwise minimize or prevent light pollution, light trespass, and glare by shielding and directing outdoor security lighting onto building surfaces

Table 1 (Continued)
Applicable Goals, Objectives, and Policies of the General Plan

Goal/Objective/Policy	Would the Project Conflict?
	and toward the interior of the Project Site to prevent light spillover onto sensitive resources. The Project design would also minimize glare by using low-reflective glass, or glass treated with anti-reflective coating in the building façades. In addition, the Project's extensive landscaping along the perimeter would be utilized for screening to minimize views of the Project Site and any associated glare.
Objective 9.40: Ensure efficient and effective energy management in providing appropriate levels of lighting for private outdoor lighting for private streets, parking areas, pedestrian areas, security lighting, and other forms of outdoor lighting and minimize or eliminate the adverse impact of lighting due to light pollution, light trespass, and glare.	**No Conflict.** Proposed lighting would be implemented in accordance with the lighting standards set forth in the California Building Code and the California Energy Code, which establish light intensities for various land uses. Furthermore, as discussed above under Goal 9P, the Project would minimize light pollution, light trespass, and glare.
Policy 9.40.1: Require lighting on private streets, pedestrian oriented areas, and pedestrian walks to meet minimum City standards for street and sidewalk lighting.	**No Conflict.** Refer to the discussion for Goal 9P above.
Policy 9.40.2: Require parking lot lighting and related pedestrian lighting to meet recognized national standards.	**No Conflict.** Refer to the discussion for Goal 9P above. In addition, the Project would provide sufficient lighting in subterranean parking areas to maximize visibility and reduce areas of concealment. There would also be sufficient lighting along walkways to facilitate pedestrian orientation and clearly identify a secure route between the two parking levels below the building and entry into the building.
Policy 9.40.3: Develop regulations to ensure quality lighting to minimize or eliminate the adverse impact of lighting due to light pollution, light trespass, and glare for façade lighting, security lighting, and advertising lighting, including billboards.	**No Conflict.** While this policy is a citywide goal relating to lighting regulations, the Project would not conflict with its implementation. Refer to the discussion for Goal 9P above.
General Plan Conservation Element (Section 15)	
Objective: Protect and reinforce natural and scenic vistas as irreplaceable resources and for the aesthetic enjoyment of present and future generations.	**No Conflict.** The Project is located in an area that is highly urbanized with built out surroundings. Therefore, publicly available scenic vistas of valued visual resources are not available in the vicinity of the Project Site. As such, the Project would not obstruct or remove access to natural and scenic vistas.

Project consistency with additional Framework Element goals, objectives, and policies is analyzed in Section IV.E, Land Use and Planning, of this Draft EIR.

Source: Eyestone Environmental, 2021.

Table 2
Applicable Goals, Objectives, and Policies of the West Los Angeles Community Plan

Goal/Objective/Policy	Analysis of Project Consistency
Residential	
Policy 1-3.1: Require architectural compatibility and adequate landscaping for new multi-family residential development to protect the character and scale of existing residential neighborhoods.	**No Conflict.** The Project would feature a contemporary architectural style that would be designed to create a visually unified site with a new building designed to complement the existing surrounding uses and respond to the low- to mid-scale character of the surrounding area. The proposed building would include building fenestration, a variety of surface materials, and a stepped design to create horizontal and vertical articulation, provide visual interest, and maintain the existing scale in the vicinity of the Project Site. In particular, the building's scale is defined by varying massing and height components that break up the façade into distinct and offset planes. Specifically, the building is designed so that the six-story portion is located nearest the commercial uses and four-story hotels to the north. The building then steps down in height as it nears the southerly and westerly property lines nearest the residential uses. Additionally, as discussed in Section II, Project Description, of this Draft EIR, there is a grade difference ranging between approximately 14 feet to 42 feet along the southern and eastern boundaries of the Project Site (i.e., Orton Avenue and Keswick Avenue), such that the Project Site is situated below most of the adjacent single-family residential uses. As such, due to topography, the easterly portion of the building, while technically five stories in height, is only three stories when viewed from the elevation of the adjacent properties to the east. Similarly, as properties to the south are at a higher elevation than the Project Site, when looking toward the five-story east wing, it appears as four stories. With respect to landscaping, the various components and levels of the proposed building would be integrated by a series of landscaped courtyards and terraces provided at every floor of the building. The Project would provide an overall total of 14,630 square feet of open space, which would include landscaped terraces incorporated into the building design to complement the building façade, reduce massing, and create green spaces at all building levels, from the ground floor to the top of the building. In addition to the landscaped terraces and courtyards, the Project is designed with extensive landscaping along the Project Site's perimeter side and rear yards that would provide screening and buffering between the adjacent residential uses. Furthermore, the eight street trees to be removed would be replaced with 16 street trees in accordance with City requirements and the 65 on-site ornamental trees to be removed would be replaced on a 1:1 basis, consistent with City policy.

Table 2 (Continued)
Applicable Goals, Objectives, and Policies of the West Los Angeles Community Plan

Goal/Objective/Policy	Analysis of Project Consistency
Commercial	
Policy 2-3.2: Require that projects be designed and developed to achieve a high level of quality, distinctive character, and compatibility with existing uses and development.	**No Conflict.** The Project would develop a high-quality eldercare facility that would complement the existing surrounding uses. Specifically, the Project would feature a contemporary architectural style that would create a visually unified site with a new building designed to complement the existing surrounding uses and respond to the low- to mid-scale character of the surrounding area. The proposed building would include building fenestration, a variety of surface materials, and a stepped design to create horizontal and vertical articulation, provide visual interest, and maintain the existing scale in the vicinity of the Project Site. In particular, the building's scale is defined by varying massing and height components that break up the façade into distinct and offset planes. Refer also to the discussion for Policy 1-3.1 above.
Policy 2-2.2: New development needs to add to and enhance the existing pedestrian street activity.	**No Conflict.** The Project would enhance the existing pedestrian street activity through building design and proposed streetscape amenities by vacating and realigning the portion of Bellwood Avenue that bifurcates the Project Site as a private street, with public through access maintained from both sides of Bellwood Avenue. With the realignment, Bellwood Avenue would be closer to the commercial uses and activity along Olympic Boulevard. Street improvements along the realigned portion of Bellwood Avenue would include enhanced pedestrian sidewalks connecting the Project Site to the commercial uses along Olympic Boulevard to the north as well as new street trees and landscaping. Pedestrian access to the building would also be provided along Bellwood Avenue where the building lobby entrance would be located. An outdoor bistro terrace would also be provided adjacent to the lobby entrance, which would provide an active ground floor with pedestrian friendly improvements.
Policy 2-4.1: Require that any proposed development be designed to enhance and be compatible with adjacent development.	**No Conflict.** The vicinity of the Project Site is developed with a mix of commercial and residential uses. The Project Site is bounded by the Courtyard by Marriott hotel (approximately four stories and 54 feet in height), and the Century Park hotel (approximately four stories and 58 feet in height) to the north; a small commercial shopping center that includes a cleaners and a smog check station, and a beauty salon to the west; and single-family residential uses to the east and to the south. Against this backdrop, the Project would replace the current low-rise multi-family residential buildings within the Project Site with an eldercare facility 38 feet to 70 feet in height. The new development would be compatible with the adjacent development both in terms of uses and proposed design that would complement the existing surrounding uses and

Table 2 (Continued)
Applicable Goals, Objectives, and Policies of the West Los Angeles Community Plan

Goal/Objective/Policy	Analysis of Project Consistency
	respond to the low- to mid-scale character of the surrounding area, as previously discussed above in Policy 1-3.1.
Policy 2-4.2: Preserve community character, scale, and architectural diversity.	**No Conflict.** Refer to the discussion for Policy 1-3.1 and Policy 2-4.1 above.
Policy 2-4.3: Improve safety and aesthetics of parking areas in commercial areas.	**No Conflict.** The Project would provide two subterranean parking levels beneath the proposed building. The Project would incorporate various security measures in the parking areas to enhance on-site security, including panic buttons within the parking facilities and parking area elevators, and access controls including private on-site security, a closed-circuit security camera system, and keycard entry for the building and parking areas. In addition, the Project would provide sufficient lighting in parking areas to maximize visibility and reduce areas of concealment.
Chapter V—Urban Design	
Design for Individual Projects	
C. Multiple Residential	
1. Site Planning: All multi-family residential projects of five or more units shall be designed around a landscaped focal point or courtyard to serve as an amenity for residents and the following goals are proposed: a. Providing a pedestrian entrance at the front of each project b. Requiring usable open space for outdoor activities, especially for children.	**No Conflict.** The Project would develop a new eldercare facility comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms and would provide an open central courtyard on Level P1. The central outdoor courtyard would provide direct access to the common indoor areas, which would provide amenities including dining rooms, a gym, indoor pool and spa, wellness center, and several other activity rooms. These common areas would be separate from the parking area, and visitors who would park at the P1 level would not have direct access to the central courtyard or common areas. Stairs and elevators would be available from Level P1 to access the ground level above. Primary pedestrian access to the proposed building would be available from the ground floor. Additional terraces would be provided at the ground floor, including a large ground level terrace, the memory care terrace, and the bistro terrace. The ground level terrace would include bench and table seating, raised planters, and bistro tables. The memory care terrace would feature a lawn, raised vegetable planters, bench and table seating, and raised planters. The bistro terrace would include bistro tables. Additional terraces would be provided on levels two through six. On the second floor, an additional terrace would be provided that would include raised vegetable planters, benches and table seating, raised planters, and bistro tables. A smaller terrace would be provided on the third floor that would offer benches and table seating and bistro tables. Two larger terraces would be included on the

Table 2 (Continued)
Applicable Goals, Objectives, and Policies of the West Los Angeles Community Plan

Goal/Objective/Policy	Analysis of Project Consistency
	fourth floor that would provide raised water features, benches and table seating, raised planters, and bistro tables. Landscaped terraces would also be provided on the fifth and sixth levels that include raised water features, benches and table seating, raised planters, and bistro tables.
2. Design: The design of all buildings shall be of a quality and character that improves community appearance by avoiding excessive variety and monotonous repetition. Achievement of this can be accomplished through: a. Requiring the use of articulation, recess, or perforations of surfaces to break up long, flat building façades; b. Utilizing of complementary building materials in building façades; c. Integrating building fixtures, awnings, security gates, etc. into the design of a building; d. Screening all rooftop equipment and building appurtenances from adjacent properties.	**No Conflict.** Refer to the discussion for Policy 1-3.1 above.
3. Parking Structures: Parking structures shall be integrated with the design of the buildings they serve through: a. Designing parking structure exteriors to match the style, materials, and color of the main building; b. Maximizing commercial uses on the ground floor; c. Landscaping to screen parking structures not architecturally integrated with the main building; d. Utilizing decorative walls and/or landscaping to buffer residential uses from parking structures.	**No Conflict.** The Project would provide vehicle parking spaces within two subterranean parking levels. Access to the subterranean parking levels would occur from one entry/exit driveway located along Bellwood Avenue near the northern boundary of the building. The entrance to the subterranean parking levels would be designed to match the style, materials, and color of the main building.

Project consistency with additional Community Plan goals, objectives, and policies is analyzed in Section IV.E, Land Use and Planning, of this Draft EIR.

Source: Eyestone Environmental, 2021.

Appendix C

Air Quality and Greenhouse Gas Emissions

Bellwood Senior Residential Community

Draft EIR

Technical Appendix for Air Quality and Greenhouse Gas Emissions

- Appendix C-1: Air Quality and Greenhouse Gas Emissions Methodology
- Appendix C-2: Air Quality Worksheets and Modeling Output Files
  - Appendix C-2.1: Summary of Air Pollutant Emissions
  - Appendix C-2.2: Localized Significance Threshold (LST) Calculation Worksheet
  - Appendix C-2.3: Summary of Construction Assumptions
  - Appendix C-2.4: CalEEMod Outputs
    - Baseline Operations (Existing Year)
    - Baseline Operations (Buildout Year)
    - Project Construction and Operations (Buildout Year)
    - Project Construction Onsite
  - Appendix C-2.5: CO Hotspot Analysis

- Appendix C-3: Greenhouse Gas Worksheets and Modeling Output Files
  - Appendix C-3.1: GHG Modeling Parameters and Summary of Emissions
    - GHG Emissions Summary
    - GHG Parameters and Summary
    - Electric Vehicle Charging Calculations

  - Appendix C-3.2: CalEEMod Outputs
    - Baseline Operations (Existing Year)
    - Baseline Operations (Buildout Year)
    - Project Construction and Operations (Buildout Year)

Bellwood Senior Residential Community

Draft EIR

Appendix C-1-Air Quality and Greenhouse Gas Emissions Methodology

AIR QUALITY AND GREENHOUSE GAS EMISSIONS METHODLOGY

Bellwood Senior Residential Community

Prepared by:

Eyestone Environmental, LLC

May 2021

Bellwood Senior Residential Community Project

Air Quality and Greenhouse Gas Emissions Methodology

1. Introduction

Eyestone Environmental has been retained to conduct a comprehensive greenhouse gas (GHG) and criteria air pollutant emissions assessment for the Bellwood Senior Residential Community Project (the "Project"). Emissions during both construction and operation of the Project were quantified. This assessment describes the methodology used to estimate the GHG and air pollutant emissions from existing and Project conditions and describes the methodology used to quantify GHG and air pollutant emission reductions from project design features and mitigation measures.

2. Air Pollutant and Greenhouse Gas Emissions Methodology

The Project would result in direct emissions of criteria pollutants and direct and indirect GHG emissions generated by different types of emissions sources, including:[1]

- Direct Emissions:
  - Construction: emissions associated with demolition of existing uses, shoring, excavation, grading, and construction-related equipment and vehicular activity;
  - Area source: emissions associated with consumer products, architectural coatings, and landscape equipment;
  - Energy source (building operations): emissions associated with space heating and cooling, and water heating;

[1] *Direct sources of emissions include Project-related vehicular trips and onsite combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel). Whereas, indirect sources of emissions include offsite emissions associated with purchased electricity and embodied energy (e.g., energy used to convey, treat, and distribute water and wastewater)*

  - Mobile source: emissions associated with vehicles accessing the project site; and
  - Stationary source: emissions associated with stationary equipment (e.g., emergency generators).
- Indirect Emissions:
  - Energy source (building operations): emissions associated with energy consumption, and lighting;
  - Solid Waste: emissions associated with the decomposition of the waste, which generates methane based on the total amount of degradable organic carbon; and
  - Water/Wastewater: emissions associated with energy used to pump, convey, deliver, and treat water.

a. Emission Inventories

Project-related construction and operation emissions were calculated using SCAQMD's recommended California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California. Data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is considered by the SCAQMD to be an accurate and comprehensive tool for quantifying criteria pollutant and GHG impacts from land use projects throughout California.[2]

CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the USEPA AP-42 emission factors, CARB's on-road emission model (EMission FACtor model (EMFAC)) and off-road equipment emission model (Off-road Emissions Inventory Program model (OFFROAD)).

[2] *See www.caleemod.com.*

(1) Construction

Construction activities would generate emissions from off-road equipment usage, on-road vehicle travel (truck hauling, vendor deliveries, and workers commuting), architectural coating, and paving. Each of these source types is discussed in more detail below. The Project's construction emissions were calculated using the SCAQMD recommended CalEEMod (Version 2016.3.2). Please refer to CalEEMod construction output files for a complete listing of construction details modeled. CalEEMod default values were used for equipment and vehicle emission factors, equipment load factors and vehicle trip lengths. It should be noted that the maximum daily emissions were predicted values for the worst-case day and do not represent the emissions that would occur for every day of Project construction. The maximum daily emissions were compared to the SCAQMD daily regional numeric indicators. Annual emissions were calculated based on the total number of hours each piece of equipment was used and the total number of vehicular trips (i.e., worker, vendor, and haul) over the duration of construction. In accordance with the SCAQMD's guidance, GHG emissions from construction were amortized over the lifetime of the Project. The SCAQMD defines the lifetime of a project as 30 years.[3] Therefore, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

(a) Emissions from Construction Equipment

The emission calculations associated with construction equipment are from off-road equipment engine use based on the equipment list and phase length. Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod assumes all of the equipment operates on diesel fuel. Construction equipment emissions vary with engine model years in which newer equipment will emit fewer pollutants. As a conservative assumption, the CalEEMod model uses an emission rate for equipment which represents an average model year for available equipment within the Air Basin. CalEEMod calculates the exhaust emissions based on CARB OFFROAD methodology using the equation presented below.

<u>Construction Off-Road Equipment</u>:

$$\text{Emissions Diesel [lbs]} = (\sum_i (EF_i \times Pop_i \times AvgHP_i \times Load_i \times Activity_i$$

Where: EF_i = Emission factor from OFFROAD (lbs/hr)

Pop_i = Population (quantity of same equipment)

[3] *SCAQMD, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, 2008.*

$AvgHP_i$ = Maximum rated average horsepower (hp)

$Load_i$ = Load Factor (dimensionless)

$Activity_i$ = Hours of operation (hours)

i = Summation index

Fugitive dust emissions from use of off-road equipment were also calculated using CalEEMod based on the types of equipment used during grading activities and based on the amount of import/export from loading or unloading dirt into haul trucks. These methods have been adapted from USEPA's AP-42 method for Western Coal Mining. As recommended by SCAQMD, the fugitive dust emissions from the grading phase are calculated using the methodology described in USEPA AP-42. PM_{10} and $PM_{2.5}$ emissions from fugitive dust will be controlled by watering the construction site three times a day consistent with SCAQMD Rule 403 and were estimated to be reduced by 61 percent.

(b) Emissions from On-Road Trips

Construction generates on-road vehicle exhaust, evaporative, and dust emissions from personal vehicles for worker commuting, vendor deliveries, and trucks for soil and material hauling. These emissions are based on the number of trips and VMT along with emission factors from EMFAC. The emissions from mobile sources were calculated with the trip rates, trip lengths and emission factors for running from EMFAC as follows:

<u>Construction On-Road Equipment</u>:

Emissions pollutant (lbs) = VMT * EF running, pollutant

Where: VMT = vehicle miles traveled (miles)

EF running,pollutant = emission factor for running emissions (lbs/VMT)

Evaporative emissions, starting and idling emissions in CalEEMod were calculated by multiplying the number of trips times the respective emission factor for each pollutant.

(c) Emissions from Architectural Coating

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings. CalEEMod calculates the VOC evaporative emissions from application of residential and non-residential surface coatings using the following equation:

Construction Architectural Coating Emissions:

Emissions Architectural Coatings (lbs) $=EF_{AC} \times F * A_{paint}$

Where: EF_{AC} = Emission Factor (lb/sf)

A_{paint} = Building Surface Area (sf)

The CalEEMod tool assumes the total surface for painting equals 2.7 times the floor square footage for residential and 2 times that for nonresidential square footage. All of the land use information provided by a metric other than square footage erewill be converted to square footage using the default conversions or user defined equivalence.

F = fraction of surface area [%].

The default values based on SCAQMD methods used in their coating rules are 75 percent for the interior surfaces and 25 percent for the exterior shell. Parking areas are based on 6-percent coverage.

The emission factor (EF) is based on the VOC content of the surface coatings and is calculated estimated using the equation below:

$EF_{AC} = C_{VOC}/454(g/lb) \times 3.785(L/gal)/180*sf)$

Where: EF = emission factor (lb/sf)

C = VOC content (g/L or gram per liter)

The emission factors for coating categories were calculated using the equation above based on default VOC content from provided by the air districts or CARB's statewide limits in CalEEMod. Architectural coating VOC emission factors are also consistent with SCAQMD Rule 1113 as discussed above.

(d) Emissions from Paving

CalEEMod estimates VOC off-gassing emissions associated with asphalt paving of parking lots using the following equation:

$Emissions_{AP}$ (lbs) $= EF_{AP} \times A_{parking}$

Where: EF = emission factor (lb/acre)

A = area of the parking lot (acre)

Note: The Sacramento Metropolitan Air Quality Management District (SMAQMD) default emission factor is 2.62 lb/acre.

(2) Operation

Similar to construction, the SCAQMD-recommended CalEEMod was used to calculate potential emissions generated by the Project, including area source, energy sources (electricity and natural gas), mobile source, stationary sources (emergency generator), solid waste generation and disposal, and water usage/wastewater generation.

(3) Area Source Emissions

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes consumer products, architectural coatings, and landscape maintenance equipment. Pollutant emissions generated by the Project were calculated using CalEEMod defaults, based upon the land uses that will be included in each project.

Consumer products are chemically formulated products used by household and institutional consumers, including, but not limited to, detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products; but does not include other paint products, furniture coatings, or architectural coatings. SCAQMD did an evaluation of consumer product use compared to the total square footage of buildings using data from CARB consumer product Emission Inventory. To calculate the VOC emissions from consumer product use, the following equation was used in CalEEMod:

Emissions Consumer Products (lbs) = EF_{CP} x Building Area

Where:

EF_{CP} = pounds of VOC per building square foot

The factor is 1.98×10^{-5} lbs/sf for SCAQMD areas.

Building Area = the total square footage of all buildings including residential square footage

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. The operational emission methodology from architecture coating is the same as the construction methodology discussed above. All land

use buildings are assumed to be repainted at a rate of 10 percent of area per year. This is based on the assumptions used by SCAQMD.

The combustion of fossil fuels to operate landscape equipment such as lawnmowers and trimmers, results in pollutant emissions. The emissions occur on-site and are considered a direct source of pollutant emissions. The emissions for landscaping equipment are based on the size of the land uses, the pollutant emission factors for fuel combustion. Pollutant emissions from landscaping equipment are generally calculated in CalEEMod as follows:

<u>Landscaping Equipment</u>:

Landscaping Equipment Emissions [lbs] = $(\Sigma_i \, (\text{Units} \times EF_{LE} \times A_{LE})_i)$

Where: Units = Number of land use units (same land use type) [1,000 sf]

EF_{LE} = Emission factor [grams (g)/1,000 sfday]

i = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

(4) Energy Emissions (Electricity and Natural Gas)

Pollutant emissions are emitted as a result of activities in buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits pollutant emissions directly into the atmosphere; when this occurs in a building, it is a direct emission source associated with that building. Pollutant emissions are also emitted during the generation of electricity from fossil fuels. When electricity is used in a building, the electricity generation typically takes place off-site at the power plant; electricity use in a building generally causes emissions in an indirect manner.

Energy demand emissions were calculated using the CalEEMod emissions inventory model. Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as in plug-in appliances. CalEEMod calculates energy use from systems covered by Title 24 Building Energy Efficiency Standards (e.g., heating, ventilation, and air conditioning [HVAC] system, water heating system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources not covered by Title 24 or lighting.

CalEEMod energy demand is based on the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) study.[4] The data is specific for climate zones and, therefore, Zone 11 was selected for the Project Site based on the ZIP Code tool. CalEEMod currently assumes 2016 Title 24 Energy Efficiency Standards when calculating project energy usage. In order to account for 2019 Title 24 Energy Efficiency Standards, energy consumption was assumed to be 10 percent more efficient than the 2016 Building Energy Efficiency Standards requirements.

(a) Electricity

Because power plants are existing stationary sources permitted by air districts and/or the USEPA, criteria pollutant emissions are generally associated with the power plants themselves, and not individual buildings or electricity users. Additionally, criteria pollutant emissions from power plants are subject to local, state, and federal control measures, which can be considered to be the maximum feasible level of mitigation for stack emissions. In contrast, GHG emissions from power plants are not subject to stationary source permitting requirements to the same degree as criteria pollutants. As such, GHGs emitted by power plants may be indirectly attributed to individual buildings and electricity users, who have the greatest ability to decrease usage by applying mitigation measures to individual electricity "end uses." CalEEMod therefore calculates GHG emissions (but not criteria pollutant emissions) from regional power plants associated with building electricity use.

Emissions associated with electricity demand are based on the size of the residential, commercial and retail land uses, the electrical demand factors for the land uses, the emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. Annual electricity GHG emissions in units of $MTCO_2e$ are calculated as follows:

[4] *CEC, Commercial End-Use Survey, March 2006.*

Electricity:

Annual Emissions [$MTCO_2e$] = (Σ_i (Units × D_E × EF_E × GWP)$_i$) ÷ 2,204.62

Where: Units = Number of land use units (same land use type) [1,000 sf]

D_E = Electrical demand factor [megawatt-hour (MWh)/1,000 sf/yr]

EF_E = GHG emission factor [pounds per megawatt-hour (MWh)]

GWP = Global warming potential [CO_2 = 1, CH_4 = 21, N_2O = 310]

2,204.62 = Conversion factor [pounds/MT]

i = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

GHG emissions from electricity use are directly dependent on the electricity utility provider. The Los Angeles Department of Water and Power (LADWP) provides electric service to the Project Site. Thus, GHG intensity factors for LADWP were selected in CalEEMod. Intensity factors for GHGs due to electrical generation to serve the electrical demands of the existing condition were obtained from the LADWP 2017 Power Integrated Resource Plan, which provides a CO_2 intensity of 801 pounds of CO_2 per MWh for 2019. By 2030, at least 50 percent of electricity shall be obtained from renewable sources. The 2016 Power Integrated Resource Plan estimates that the LADWP CO2 intensity would be 500 pounds of CO_2 per MWh by Year 2026.[5] As year-by-year data is currently not available, the CO_2 intensity factor for the Project buildout was determined based on straight line extrapolation based on current and Year 2026 data points (801 pounds of CO_2 per MWh for Year 2019 and 500 pounds of CO_2 per MWh for Year 2026).

(b) Natural Gas

The direct source emissions associated with natural gas combustion are based on the size of the land uses and the natural gas combustion factors for the land uses in units of million British thermal units (MMBtu). Natural gas emissions are calculated in CalEEMod as follows:

[5] *2016 Final Power Integrated Resource Plan, Figure 4-7. LADWP. December 2016.*

Natural Gas:

Natural Gas Emissions (lbs) = (Σ_i (Units × D_{NG} × EF_{NG})$_I$)

Where: Units = Number of land use units (same land use type) [1,000 sf]

D_{NG} = Natural Gas combustion factor [MMBtu/1,000 sf]

EF_{NG} = Natural Gas combustion factor [pounds/MMBtu]

I = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

(5) Mobile Source Emissions

Mobile-source emissions were calculated using the CalEEMod emissions inventory model. CalEEMod calculates the emissions associated with on-road mobile sources associated with residents, employees, visitors, and delivery vehicles visiting the Project Site based on the number of daily trips generated and vehicle miles traveled (VMT). The Traffic Study prepared by Gibson Transportation Consulting had calculated Project VMT which was entered into CalEEMod in calculating Project mobile source emissions.

Modeling was also conducted using the Los Angeles County vehicle fleet mix for all vehicle types as provided in EMFAC2014.

Mobile source emissions were generally calculated in CalEEMod as follows:

Mobile:

Mobile Emissions [lbs] = (Σ_i (Units × ADT x D_{TRIP} × EF_i)

Where: Units = Number of vehicles (same vehicle model year and class)

ADT = Average daily trip rate [trips/day]

D_{TRIP} = Trip distance [miles/trip]

EF = Pollutant emission factor [pounds per mile]

i = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

Mobile source operational emissions were calculated based on the Project VMT estimates provided by Gibson Transportation Consulting. [6] As discussed in Section IV.G, Transportation, of this Draft EIR, to calculate peak daily trip estimates, the Los Angeles Department of Transportation (LADOT) VMT Calculator was used.

Previously, trip generation for land uses was calculated based on survey data collected by the Institute of Transportation Engineers (ITE). However, these ITE trip generation rates were based on data collected at suburban, single-use, free standing sites, which may not be representative of urban mixed-use environments. Beginning in 2019, the USEPA has sponsored a study to collect travel survey data from mixed-use developments in order provide a more representative trip generation rate for multi-use sites. Results of the USEPA survey indicate that trip generation and VMT are affected by factors such as resident and job density, availability of transit, and accessibility of biking and walking paths. Based on these factors, the USEPA has developed equations known as the EPA Mixed-Use Development (MXD) model to calculate trip reductions for multi-use developments.[7] The LADOT VMT Calculator incorporates the USEPA MXD model and accounts for project features such as increased density and proximity to transit, which would reduce VMT and associated fuel usage in comparison to free-standing sites.

The Project design includes characteristics that would reduce trips and VMT as compared to a standard project within the air basin as measured by the air quality model (CalEEMod). While these Project characteristics primarily reduce greenhouse gas emissions, they would also reduce criteria air pollutants discussed herein. These relative reductions in vehicle trips and VMT from a standard project within the air basin help quantify the criteria air pollutant emissions reductions achieved by locating the Project in any infill, HQTA area that promotes alternative modes of transportation. A ratio of ITE trip generation rates for weekend and weekday scenarios was used to estimate Project VMT during weekend conditions.

(6) Stationary Source (Emergency Generator Emissions)

Emissions of GHGs associated with use of emergency generators were calculated using CalEEMod, in which emission factors are based on Table 3.4-1 (Gaseous Emission Factors for Large Stationary Diesel Engines) from EPA's AP-42: Compilation of Air Pollutant Emission Factors. The emissions are based on the horsepower rating of the

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[6] *Transportation Impact Study for the Senior Residential Community at the Bellwood Project, Gibson Transportation Consulting. February 2021, revised April 2021.*

[7] *Environmental Protection Agency, Mixed-Use Trip Generation Model. www.epa.gov/smartgrowth/mixed-use-trip-generation-model. Accessed December 16, 2019.*

diesel generator and the number of hours operated per year for testing purposes. Annual emergency generator GHG emissions in units of $MTCO_2e$ were calculated as follows:

Emergency Generator:

Emissions [lbs] = (Total HP x LF x HR × EF)

Where: Total HP = Total horsepower of emergency generators (Hp)

LF = Load Factor (CalEEMod default of 0.73)

HR = Hours Operated per Year

EF = AP-42 Emission Factor of 1.16 lb/hp-hr)

(7) Solid Waste Emissions

The generation of municipal solid waste (MSW) from day-to-day operational activities generally consists of product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, plastic, and other items routinely disposed of in trash bins. A portion of the MSW is diverted to waste recycling and reclamation facilities. Waste that is not diverted is usually sent to local landfills for disposal. MSW that is disposed in landfills results in GHG emissions of CO_2 and CH_4 from the decomposition of the waste that occurs over the span of many years.

Emissions of GHGs associated with solid waste disposal were calculated using the CalEEMod emissions inventory model. The emissions are based on the size of the retail and restaurant land uses, the waste disposal rate for the land uses, the waste diversion rate, the GHG emission factors for solid waste decomposition, and the GWP values for the GHGs emitted. Annual waste disposal GHG emissions in units of $MTCO_2e$ were calculated in CalEEMod as follows:

Solid Waste:

Annual Emissions [$MTCO_2e$] = (Σ_i (Units × D_{MSW} × EF_{MSW} × GWP)$_i$) ÷ 1.1023

Where: Units = Number of land use units (same land use type) [1,000 sf]

D_{MSW} = Waste disposal rate [tons/1,000 sf/yr]

EF_{MSW} = GHG emission factor [tons/ton waste]

GWP = Global warming potential [CO_2 = 1, CH_4 = 21, N_2O = 310]

1.1023 = Conversion factor [tons/MT]

i = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

CalEEMod allows the input of several variables to quantify solid waste emissions. The model requires the amount of waste disposed, which is the product of the waste disposal rate times the land use units. CalEEMod default annaual solid waste disposal rates used. The GHG emission factors, particularly for CH_4, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery), which are statewide averages, were used in this assessment. The Project includes a 76.4-percent recycling/diversion rate currently achieved within the City.[8]

(8) Water Usage and Wastewater Generation Emissions

GHG emissions are related to the energy used to convey, treat, and distribute water and wastewater. Thus, these emissions are generally indirect emissions from the production of electricity to power these systems. Three processes are necessary to supply potable water and include: (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, energy is used as the wastewater is treated and reused as reclaimed water.

Emissions related to water usage and wastewater generation were calculated using the CalEEMod emissions inventory model. The emissions are based on the size of the

[8] *City of Los Angeles, Sustainable City pLAn, Waste & Landfills, http://plan.lamayor.org/portfolio/waste-landfills-3rd, accessed February 21, 2019.*

land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. CalEEMod default annual water demand and wastewater rates were used. GHG emissions due to electricity are calculated in CalEEMod as follows for indoor and outdoor water demand:

<u>Water Supply, Treatment, and Distribution; Wastewater Treatment (electricity)</u>:

Annual Emissions [$MTCO_2e$] = $(\Sigma_i\ (Units \times D_W \times (EI_W \div 1{,}000) \times EF_W \times GWP)_i\ ) \div 2{,}204.62$

Where:

Units	=	Number of land use units (same land use type) [1,000 sf]
D_W	=	Water demand factor [million gallons (Mgal)/1,000 sf/yr]
EI_W	=	Electricity intensity factor [kilowatt-hours (kWh)/Mgal]
1,000	=	Conversion factor [kWh/MWh]
EF_W	=	GHG emission factor [pounds/MWh]
GWP	=	Global warming potential [CO_2 = 1, CH_4 = 21, N_2O = 310]
2,205	=	Conversion factor [pounds/MT]
i	=	Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

CalEEMod provides options to account for the use of water saving features such as the use of low-flow water fixtures (e.g., low-flow faucets, low-flow toilets). The same electricity GHG emissions factors discussed above were used for water and wastewater energy usage. In addition, the calculation of Project GHG emissions from water/wastewater usage accounts for a 20 percent reduction in water/wastewater emissions in compliance with the California Green Building Code.

b. Post-2030 Analysis

Recent studies show that the State's existing and proposed regulatory framework will put the State on a pathway to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050 if additional appropriate

reduction measures are adopted.[9] Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target.

Subsequent to the findings of these studies, SB 32 was passed on September 8, 2016, which requires that Statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. As discussed above, the new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

The emissions modeling in the 2017 Update has projected 2030 statewide emissions which take into account known commitments (reduction measures) such as SB 375, SB 350 and other measures. The emissions inventory identified an emissions gap, meaning that emissions reductions due to known commitments do not decline fast enough to achieve the 2030 target. In order to fill this gap, the 2017 Update assumed a scenario in which cap-and-trade would deliver the reductions necessary to achieve the 2030 emissions target. Although the Project is consistent with the 2017 Update, additional measures to achieve the 2030 targets and beyond are outside of the Project's control. Therefore, any evaluation of post-2030 Project emission would be speculative.

Executive Order S-3-05 establishes a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. This goal, however, has not been codified. That being said, studies have shown that, in order to meet the 2050 target, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel,

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[9] *Energy and Environmental Economics (E3). "Achieving Carbon Neutrality in California, PATHWAYS Scenarios Developed for the California Air Resources Board" (October 2020) Mahone, Amber. The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed long-term scenarios that explore the potential pace at which emission reductions can be achieved, as well as the mix of technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. The model encompasses the entire California economy with detailed representations of the buildings, industry, transportation and electricity sectors.*

will be required. In its 2008 Climate Change Scoping Plan, CARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail."[10]

Although the Project's emissions level in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the State's achievement of that goal and it is reasonable to expect the Project's net emissions level to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur. As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project is consistent with the Executive Order's horizon-year (2050) goal. Further, the Project's consistency with SCAG's 2016–2040 and 2020–2045 RTP/SCS demonstrates that the Project will be consistent with the post-2030 GHG reduction goals of 19-percent by 2035.

The Project is the type of land use development that is encouraged by the 2016–2040 and 2020–2045 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the State's long-term climate policies. On October 30, 2020, CARB certified the 2020–2045 RTP/SCS to meet the region's GHG emissions reduction targets consistent with SB 375.[11]

Further, an evaluation of the Project's consistency with SCAG's RTP/SCS was provided to demonstrate that the Project will be consistent with post-2030 SB 375 GHG reduction goals. By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with State climate targets for 2030 and beyond. An additional study by the State's leading modeler shows that the Project's VMT reductions are consistent with decarbonization and technology deployment scenarios assessed as sufficient to achieve at least an 80-percent reduction in GHG emissions by 2045.[12] Across all the scenarios, the study assumes "a 17% reduction in per capita LDV [light-duty vehicle] VMT relative to 2020 by 2045."[13]

For the reasons described above, the Project's post-2030 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets and Executive Orders S-3-05 and B-30-15.

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[10] *CARB, Climate Change Scoping Plan: A Framework for Change, December 2008, p. 117.*

[11] *California Air Resources Board. Executive Order G-20-239. October 30, 2020.*

[12] *Energy and Environmental Economics (E3), "Achieving Carbon Neutrality in California—PATHWAYS Scenarios Developed for the California Air Resources Board" (Amber Mahone, October 2020), at p. 3.*

[13] *Id. at 39.*

Bellwood Senior Residential Community

Draft EIR

Appendix C-2-Air Quality Worksheets and Modeling Output Files

- Appendix C-2: Air Quality Worksheets and Modeling Output Files
  - Appendix C-2.1: Summary of Air Pollutant Emissions
  - Appendix C-2.2: Localized Significance Threshold (LST) Calculation Worksheet
  - Appendix C-2.3: Summary of Construction Assumptions
  - Appendix C-2.4: CalEEMod Outputs
    - Baseline Operations (Existing Year)
    - Baseline Operations (Buildout Year)
    - Project Construction and Operations (Buildout Year)
    - Project Construction Onsite
  - Appendix C-2.5: CO Hotspot Analysis

AQ SUMMARY OF EMISSIONS

Construction Emissions (Unmitigated)

Regional (Daily) Unmitigated	ROG	NOx	CO	SO2	PM10	PM2.5
2021	5	96	39	0	9	4
2022	3	23	27	0	3	2
2023	11	20	26	0	3	1
MAX	11	96	39	<1	9	4
Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Difference	**(64)**	**(4)**	**(511)**	**(150)**	**(141)**	**(51)**
Impact	**No**	**No**	**No**	**No**	**No**	**No**

Localized (Daily) Unmitigated	ROG	NOx	CO	SO2	PM10	PM2.5
2021	4	43	27	<1	4	2
2022	2	18	19	<1	<1	<1
2023	10	16	19	<1	<1	<1
MAX		43	27	<1	4	2
Threshold		127	861		7	4
Difference		**(84)**	**(835)**		**(3)**	**(2)**
Impact		**No**	**No**		**No**	**No**

Construction Emissions (With Project Design Features)

Regional (Daily) w/PDFs	ROG	NOx	CO	SO2	PM10	PM2.5
2021	5	96	39	<1	9	4
2022	3	23	27	<1	3	2
2023	11	20	26	<1	3	1
MAX	11	96	39	<1	9	4
Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Difference	**(64)**	**(4)**	**(511)**	**(150)**	**(141)**	**(51)**
Impact	**No**	**No**	**No**	**No**	**No**	**No**
Percent Reduction:	0%	0%	0%	0%	0%	0%

Localized (Daily) w/PDFs	ROG	NOx	CO	SO2	PM10	PM2.5
2021	4	43	27	<1	4	2
2022	2	18	19	<1	<1	<1
2023	10	16	19	<1	<1	<1
MAX		43	27		4	2
Threshold		127	861		7	4
Difference		**(84)**	**(835)**		**(3)**	**(2)**
Impact		**No**	**No**		**No**	**No**
Percent Reduction:		0%	0%		0%	0%

Operation Emissions (Without Project Design Features)

Regional Baseline (Existing Year)	ROG	NOx	CO	SO2	PM10	PM2.5
Area	2	2	10	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	<1	4	11	<1	2	<1
Emergency Generator	<1	<1	<1	<1	<1	<1
Total	3	6	21	<1	3	<1
Regional Baseline (Buidout Year)	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**
Area	2	2	10	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	<1	3	8	<1	2	<1
Emergency Generator	<1	<1	<1	<1	<1	<1
Total	2	5	18	<1	3	<1
Regional Buildout (Buildout Year)	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**
Area	6	<1	16	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	<1	3	8	<1	2	<1
Emergency Generator	<1	1	1	<1	<1	<1
Total	7	5	25	<1	3	<1

Project Regional (Buildout Less Baseline (Buildout Year))

	ROG	NOx	CO	SO2	PM10	PM2.5
Area	4	(1)	6	(0)	(0)	(0)
Energy	<1	<1	<1	<1	<1	<1
Mobile	(0)	(0)	(0)	<1	<1	<1
Emergency Generator	<1	1	1	<1	<1	<1
Total	5	0	7	(0)	0	0
Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Difference	**(50)**	**(55)**	**(543)**	**(150)**	**(150)**	**(55)**
Impact	No	No	No	No	No	No

Project Localized (Buildout Less Baseline (Buildout Year))

Onsite Total		0	7		0	0.0
Threshold		**127**	**861**		**2**	**1**
Difference		**(126)**	**(854)**		**(2)**	**(1)**
Impact		**No**	**No**		**No**	**No**

Operation Emissions (With Project Design Features)

Regional Baseline (Existing Year)	ROG	NOx	CO	SO2	PM10	PM2.5
Area	2	2	10	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	<1	4	11	<1	2	<1
Emergency Generator	<1	<1	<1	<1	<1	<1
Total	3	6	21	<1	3	<1
Regional Baseline (Buidout Year)	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**
Area	2	2	10	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	<1	3	8	<1	2	<1
Emergency Generator	<1	<1	<1	<1	<1	<1
Total	2	5	18	<1	3	<1
Regional Buildout (Buildout Year)	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**
Area	6	<1	16	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	<1	3	8	<1	2	<1
Emergency Generator	<1	1	1	<1	<1	<1
Total	7	5	25	<1	3	<1

Project Regional (Buildout Less Baseline (Buildout Year))

	ROG	NOx	CO	SO2	PM10	PM2.5
Area	4	(1)	6	(0)	(0)	(0)
Energy	<1	<1	<1	<1	<1	<1
Mobile	(0)	(0)	(0)	0	0	0
Emergency Generator	<1	1	1	<1	<1	<1
Total	5	0	7	(0)	0	0
Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Difference	**(50)**	**(55)**	**(543)**	**(150)**	**(150)**	**(55)**
Impact	No	No	No	No	No	No
Percent Reduction:	0%	0%	0%	0%	0%	0%

Project Localized (Buildout Less Baseline (Buildout Year))

Onsite Total		0	7		0	0.0
Threshold		**127**	**861**		**2**	**1**
Difference		**(126)**	**(854)**		**(2)**	**(1)**
Impact		**No**	**No**		**No**	**No**

Bellwood Senior Residential Community

Construction Emissions by Year

Regional								
Year	**Phase No.**	**Phase**	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**
2021	2	Demolition	4.8	52.0	30.1	0.1	3.7	2.3
	3	Grading	5.2	95.6	39.0	0.3	9.3	4.2
	4	Mat Foundation	4.0	77.6	33.4	0.2	3.8	1.8
	5	Foundation	3.6	33.9	30.8	0.1	3.0	1.7
2022	6	Building Construction	3.0	22.9	26.9	0.1	3.3	1.5
2023	6	Building Construction	2.8	20.4	26.1	0.1	3.1	1.4
	7	Architectural Coating	11.3	16.0	24.9	0.1	3.2	1.3
	8	Paving	1.1	10.2	12.4	0.0	1.0	0.6
Maximum Daily Emissions								
2021			5.2	95.6	39.0	0.3	9.3	4.2
2022			3.0	22.9	26.9	0.1	3.3	1.5
2023			11.3	20.4	26.1	0.1	3.2	1.4

Localized								
Year	**Phase No.**	**Phase**	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**
2021	**2**	Demolition	4.3	42.7	26.6	0.1	2.6	2.0
	3	Grading	2.8	27.8	20.4	0.0	3.7	2.5
	4	Mat Foundation	2.2	16.6	19.0	0.0	0.9	0.9
	5	Foundation	2.8	23.9	24.3	0.0	1.2	1.2
2022	**6**	Building Construction	2.1	17.7	19.4	0.0	0.9	0.9
2023	**6**	Building Construction	1.9	16.4	19.3	0.0	0.8	0.8
	7	Architectural Coating	10.3	12.0	17.5	0.0	0.6	0.6
	8	Paving	0.9	8.7	10.7	0.0	0.5	0.4
Maximum Daily Emissions								
2021			4.3	42.7	26.6	0.1	3.7	2.5
2022			2.1	17.7	19.4	0.0	0.9	0.9
2023			10.3	16.4	19.3	0.0	0.8	0.8

Step 1. Determine Allowable Increase using 98th percentile NO2 and Max NO2 data

Central LA NO2 Monitoring Data

SRA	City	Design Value 2016-2018	98th percentile, ppb 2016	2017	2018	Threshold (ppb)	Allowable Increase (ppb)
2	Northwest LA	47	49	46	46	100	53

SRA	City	Design Value 2006-2008	Max Hourly, ppb 2016	2017	2018	Threshold (ppb)	Allowable Increase (ppb)
2	Northwest LA	120	55	56	65	180	60

Max Hourly vs. 98th Percentile Ratio (Allowable Increase)	**88%**

Step 2. Use ratio in Step 1 to determine LST lookup value. Extrapolate/Interpolate LST look-up value for project area

LST Threshold (SRA 2, 25 meter receptor)

Project Size (acres)	NO2 (lbs/day)	98th Percentile NO2 (lbs/day)	CO (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM10 Ops (lbs/day)	PM2.5 Ops (lbs/day)	
1	103	91	562	4	3	1	1	
2	147	129	827	6	4	2	1	
5	221	194	1531	13	6	3	2	
2.2	**144**	**127**	**861**	**7**	**4**	**2**	**1**	**<----Interpolated Value**

Bellwood

Air Quality Analysis Assumptions

Notes: **All Quantities are Approximate**

Construction Details	Start Date	End Date	Duration (months)	Days (5 days per week)	Max Daily Employee Trips	Max Daily Trips (2 trips per load)	Total Trips (2 trips per load)	Max Daily Delivery Trips (2 trips per delivery)
Project	**1/1/21**	**10/31/23**	**34**	765				
Site Preparation/Demolition	1/1/21	2/28/2021	1.9	41	30	20	820	10
Grading/Excavation	3/1/21	5/31/21	3.0	66	30	162	10,686	10
Mat Foundation	6/1/21	6/2/21	0.0	1		400		0
Foundation / Concrete	6/3/21	12/31/21	6.9	153	100			100
Building Construction (Rough)	1/1/22	2/28/23	13.9	302	180			50
Finishes/Architectural Coatings	3/1/23	9/30/23	7.0	153	200			50
Paving/Landscaping	10/1/23	10/31/23	1.0	22	40			20

Construction					
Senior Housing DUs	192	d.u.	-----		
Common Open Space	50,463	s.f.	-----		
Parking-subterranean	56,000	s.f.	140	spaces	

Demolition Quantities					
Building Square Footage (SF)	43,939	s.f.	-----		
Parking/asphalt/concrete (SF)	16,400	s.f.			

Import/Export Quantities during Grading						Total:
Import	-	-				-
Export	74,800	-				74,800

Type of Construction Equipment (number of units for each phase. Assumed 8 hours per day)

Equipment	Construction Phase						
	Site Prep / Demo	Grading	Mat Foundation	Foundation	Building Construction	Architectural Coatings	Paving / Landscaping
Air Compressor	1	-	-	-	2	4	-
Aerial Lift	-	-	-	-	2	4	-
Bore/Drill Rig	-	1	-	-	-	-	-
Cement and Mortar Mixers	-	-	2	-	-	-	1
Concrete/Industrial Saws	2	-	-	1	1	-	-
Cranes (Tower)	-	-	-	1	1		-
Cranes (Mobile)	-		-	1	1	-	-
Crawler Tractors	-	-	-	-	-	-	-
Crushing/Proc. Equipment	-	-	-	-	-	-	-
Excavators	-	2	-	-	-	-	-
Forklifts	-	1	-	2	3	3	-
Generator Sets	-	-	-	-	-	-	-
Graders	-	-	-	-	-	-	-
Off-Highway Tractors	-	-	-	-	-	-	-
Water Truck	1	1	-	-	-	-	-
Pavers	-	-	-	-	-	-	-
Paving Equipment	-	-	-	-	-	-	1
Pumps	-	-	4	2	-	-	-
Plate Compactors	-	-	-	4	-	-	1
Rollers	-	-	-	-	-	-	-
Rough Terrain Forklifts	-	-	-	2	-	-	-
Rubber Tired Dozers	2	1	-	-	-	-	-
Rubber Tired Loaders	2	1	-	-	-	-	-
Scrapers	-	-	-	-	-	-	-
Signal Boards	-	-	-	-	-	-	-
Skid Steer Loaders	-	-	-	-	-	-	2
Surfacing Equipment	-	-	-	-	-	-	-
Tractors/Loaders/Backhoes	2	1	-	-	1	-	1
Trenchers	-	-	-	-	-	-	1
Welders	-	1	2	2	1	-	-
Total Pieces	10	9	8	15	12	11	7

Bellwood - Existing Baseline Operations (2019)

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
Condo/Townhouse	112.00	Dwelling Unit	2.20	43,939.00	320

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2019
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	801	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP SB100 RPS - 801 lbs CO2/MWh (2019)

Land Use - see project description

Vehicle Trips - see assumptions

Woodstoves - No Wood Stoves

Energy Use - Existing Baseline

Mobile Land Use Mitigation -

Energy Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	29,659.00	75,600.00
tblArchitecturalCoating	ConstArea_Residential_Interior	88,976.00	226,800.00
tblAreaCoating	Area_Residential_Exterior	29659	75600
tblAreaCoating	Area_Residential_Interior	88976	226800
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	220.00	230.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	3.00	10.00
tblEnergyUse	NT24E	3,125.85	3,795.01
tblEnergyUse	NT24NG	3,046.55	4,831.00
tblEnergyUse	T24E	286.69	186.63
tblEnergyUse	T24NG	15,240.45	13,424.50
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	5.60	0.00

tblLandUse	LandUseSquareFeet	112,000.00	43,939.00
tblLandUse	LotAcreage	7.00	2.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	801
tblVehicleTrips	CC_TL	8.40	6.61
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	8.70	0.00
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	0.00
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	0.00
tblVehicleTrips	HW_TTP	40.20	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	5.67	0.00
tblVehicleTrips	ST_TR	0.00	477.00
tblVehicleTrips	SU_TR	4.84	0.00
tblVehicleTrips	SU_TR	0.00	477.00
tblVehicleTrips	WD_TR	5.81	0.00
tblVehicleTrips	WD_TR	0.00	477.00
tblWoodstoves	NumberCatalytic	5.60	0.00
tblWoodstoves	NumberNoncatalytic	5.60	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5311	1.6868	9.9580	0.0106		0.1786	0.1786		0.1786	0.1786						
Energy	0.0604	0.5162	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417						
Mobile	0.9221	4.2075	10.8722	0.0314	2.4407	0.0378	2.4785	0.6533	0.0355	0.6888						
Total	**2.5136**	**6.4105**	**21.0499**	**0.0453**	**2.4407**	**0.2581**	**2.6988**	**0.6533**	**0.2558**	**0.9091**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5311	1.6868	9.9580	0.0106		0.1786	0.1786		0.1786	0.1786						
Energy	0.0604	0.5162	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417						
Mobile	0.9221	4.2075	10.8722	0.0314	2.4407	0.0378	2.4785	0.6533	0.0355	0.6888						
Total	**2.5136**	**6.4105**	**21.0499**	**0.0453**	**2.4407**	**0.2581**	**2.6988**	**0.6533**	**0.2558**	**0.9091**						

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9221	4.2075	10.8722	0.0314	2.4407	0.0378	2.4785	0.6533	0.0355	0.6888						
Unmitigated	0.9221	4.2075	10.8722	0.0314	2.4407	0.0378	2.4785	0.6533	0.0355	0.6888						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Condo/Townhouse	0.00	0.00	0.00		
User Defined Commercial	477.00	477.00	477.00	1,147,681	1,147,681
Total	477.00	477.00	477.00	1,147,681	1,147,681

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
User Defined Commercial	0.00	6.61	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.548007	0.045751	0.200309	0.124119	0.017133	0.006025	0.018861	0.028423	0.002391	0.002469	0.004915	0.000672	0.000925
User Defined Commercial	0.548007	0.045751	0.200309	0.124119	0.017133	0.006025	0.018861	0.028423	0.002391	0.002469	0.004915	0.000672	0.000925

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0604	0.5162	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417						
NaturalGas Unmitigated	0.0604	0.5162	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	5601.69	0.0604	0.5162	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417						
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0604**	**0.5162**	**0.2197**	**3.3000e-003**		**0.0417**	**0.0417**		**0.0417**	**0.0417**						

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	5.60169	0.0604	0.5162	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417						
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0604**	**0.5162**	**0.2197**	**3.3000e-003**		**0.0417**	**0.0417**		**0.0417**	**0.0417**						

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5311	1.6868	9.9580	0.0106		0.1786	0.1786		0.1786	0.1786						
Unmitigated	1.5311	1.6868	9.9580	0.0106		0.1786	0.1786		0.1786	0.1786						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1920					0.0000	0.0000		0.0000	0.0000						
Consumer Products	0.8700					0.0000	0.0000		0.0000	0.0000						
Hearth	0.1848	1.5792	0.6720	0.0101		0.1277	0.1277		0.1277	0.1277						
Landscaping	0.2843	0.1076	9.2860	4.9000e-004		0.0509	0.0509		0.0509	0.0509						
Total	**1.5311**	**1.6868**	**9.9580**	**0.0106**		**0.1786**	**0.1786**		**0.1786**	**0.1786**						

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1920					0.0000	0.0000		0.0000	0.0000						
Consumer Products	0.8700					0.0000	0.0000		0.0000	0.0000						
Hearth	0.1848	1.5792	0.6720	0.0101		0.1277	0.1277		0.1277	0.1277						

Landscaping	0.2843	0.1076	9.2860	4.9000e-004		0.0509	0.0509		0.0509	0.0509						
Total	**1.5311**	**1.6868**	**9.9580**	**0.0106**		**0.1786**	**0.1786**		**0.1786**	**0.1786**						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Bellwood - Existing Operations (2023)

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
Condo/Townhouse	112.00	Dwelling Unit	2.22	43,939.00	320

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2023
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	678	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP SB100 RPS - 678 lbs CO2/MWh (2023)

Land Use - see project description

Vehicle Trips - see assumptions

Woodstoves - No Wood Stoves

Mobile Land Use Mitigation -

Energy Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	29,659.00	75,600.00
tblArchitecturalCoating	ConstArea_Residential_Interior	88,976.00	226,800.00
tblAreaCoating	Area_Residential_Exterior	29659	75600
tblAreaCoating	Area_Residential_Interior	88976	226800
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	220.00	230.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	3.00	10.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	5.60	0.00
tblLandUse	LandUseSquareFeet	112,000.00	43,939.00
tblLandUse	LotAcreage	7.00	2.22
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	678
tblVehicleTrips	CC_TL	8.40	6.61
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	8.70	0.00
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	0.00
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	0.00
tblVehicleTrips	HW_TTP	40.20	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	5.67	0.00
tblVehicleTrips	ST_TR	0.00	477.00
tblVehicleTrips	SU_TR	4.84	0.00
tblVehicleTrips	SU_TR	0.00	477.00
tblVehicleTrips	WD_TR	5.81	0.00
tblVehicleTrips	WD_TR	0.00	477.00
tblWoodstoves	NumberCatalytic	5.60	0.00
tblWoodstoves	NumberNoncatalytic	5.60	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5252	1.6857	9.9143	0.0106		0.1788	0.1788		0.1788	0.1788						

Energy	0.0604	0.5162	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417						
Mobile	0.6596	2.7919	7.7612	0.0282	2.4405	0.0221	2.4625	0.6531	0.0205	0.6736						
Total	**2.2452**	**4.9939**	**17.8951**	**0.0421**	**2.4405**	**0.2427**	**2.6831**	**0.6531**	**0.2411**	**0.8942**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5252	1.6857	9.9143	0.0106		0.1788	0.1788		0.1788	0.1788						
Energy	0.0604	0.5162	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417						
Mobile	0.6596	2.7919	7.7612	0.0282	2.4405	0.0221	2.4625	0.6531	0.0205	0.6736						
Total	**2.2452**	**4.9939**	**17.8951**	**0.0421**	**2.4405**	**0.2427**	**2.6831**	**0.6531**	**0.2411**	**0.8942**						

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6596	2.7919	7.7612	0.0282	2.4405	0.0221	2.4625	0.6531	0.0205	0.6736						
Unmitigated	0.6596	2.7919	7.7612	0.0282	2.4405	0.0221	2.4625	0.6531	0.0205	0.6736						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	0.00	0.00	0.00		
User Defined Commercial	477.00	477.00	477.00	1,147,681	1,147,681
Total	477.00	477.00	477.00	1,147,681	1,147,681

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

User Defined Commercial	0.00	6.61	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
User Defined Commercial	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0604	0.5162	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417						
NaturalGas Unmitigated	0.0604	0.5162	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	5601.69	0.0604	0.5162	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417						
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0604**	**0.5162**	**0.2197**	**3.3000e-003**		**0.0417**	**0.0417**		**0.0417**	**0.0417**						

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	5.60169	0.0604	0.5162	0.2197	3.3000e-003		0.0417	0.0417		0.0417	0.0417						
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0604**	**0.5162**	**0.2197**	**3.3000e-003**		**0.0417**	**0.0417**		**0.0417**	**0.0417**						

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5252	1.6857	9.9143	0.0106		0.1788	0.1788		0.1788	0.1788						
Unmitigated	1.5252	1.6857	9.9143	0.0106		0.1788	0.1788		0.1788	0.1788						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1920					0.0000	0.0000		0.0000	0.0000						
Consumer Products	0.8700					0.0000	0.0000		0.0000	0.0000						
Hearth	0.1848	1.5792	0.6720	0.0101		0.1277	0.1277		0.1277	0.1277						
Landscaping	0.2784	0.1065	9.2423	4.9000e-004		0.0512	0.0512		0.0512	0.0512						
Total	**1.5252**	**1.6857**	**9.9143**	**0.0106**		**0.1788**	**0.1788**		**0.1788**	**0.1788**						

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1920					0.0000	0.0000		0.0000	0.0000						
Consumer Products	0.8700					0.0000	0.0000		0.0000	0.0000						
Hearth	0.1848	1.5792	0.6720	0.0101		0.1277	0.1277		0.1277	0.1277						
Landscaping	0.2784	0.1065	9.2423	4.9000e-004		0.0512	0.0512		0.0512	0.0512						
Total	**1.5252**	**1.6857**	**9.9143**	**0.0106**		**0.1788**	**0.1788**		**0.1788**	**0.1788**						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Bellwood - Project Construction and Operations

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
Enclosed Parking with Elevator	140.00	Space	0.00	56,000.00	0
Health Club	50.46	1000sqft	1.16	50,463.00	0
Congregate Care (Assisted Living)	192.00	Dwelling Unit	2.22	191,291.00	549

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2023
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	678	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP SB100 RPS - 2023 Buildout Year - 678 lbs CO2/MWh

Land Use - site specific. Includes 50,560 sf of indoor common areas.
241,754 SF of floor area

Construction Phase - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - see assumptions

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Trips and VMT - Site Specific

Demolition - Existing uses = 43,939 SF
Parking/Pavement = 16,400 SF

Grading - 2.22 acres

Woodstoves - No Wood Stoves
Assumes limited fire places throughout Project site

Energy Use - see parking garage ventilation calculations

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - City of LA 2012 Waste Diversion Rate

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	25,232.00	7,315.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	75,695.00	21,945.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	129,121.00	129,600.00
tblArchitecturalCoating	ConstArea_Residential_Interior	387,364.00	388,800.00
tblAreaCoating	Area_Nonresidential_Exterior	25232	7315
tblAreaCoating	Area_Nonresidential_Interior	75695	21945
tblAreaCoating	Area_Residential_Exterior	129121	129600
tblAreaCoating	Area_Residential_Interior	387364	388800
tblConstructionPhase	NumDays	18.00	153.00
tblConstructionPhase	NumDays	230.00	2.00
tblConstructionPhase	NumDays	230.00	152.00
tblConstructionPhase	NumDays	230.00	302.00
tblConstructionPhase	NumDays	20.00	41.00
tblConstructionPhase	NumDays	8.00	66.00
tblConstructionPhase	NumDays	18.00	22.00
tblEnergyUse	LightingElect	1.75	2.33
tblEnergyUse	T24E	3.92	0.41
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	163.20	20.00
tblFireplaces	NumberWood	9.60	0.00
tblGrading	AcresOfGrading	0.00	2.22
tblGrading	MaterialExported	0.00	74,800.00
tblLandUse	LandUseSquareFeet	50,460.00	50,463.00
tblLandUse	LandUseSquareFeet	192,000.00	191,291.00
tblLandUse	LotAcreage	1.26	0.00
tblLandUse	LotAcreage	12.00	2.22
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	678
tblSolidWaste	SolidWasteGenerationRate	287.62	83.39
tblTripsAndVMT	HaulingTripLength	20.00	35.40
tblTripsAndVMT	HaulingTripLength	20.00	35.40
tblTripsAndVMT	HaulingTripNumber	274.00	820.00
tblTripsAndVMT	HaulingTripNumber	9,350.00	10,686.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	38.00	400.00
tblTripsAndVMT	VendorTripNumber	38.00	100.00
tblTripsAndVMT	VendorTripNumber	38.00	50.00
tblTripsAndVMT	VendorTripNumber	0.00	50.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	WorkerTripNumber	25.00	30.00
tblTripsAndVMT	WorkerTripNumber	23.00	30.00
tblTripsAndVMT	WorkerTripNumber	183.00	30.00
tblTripsAndVMT	WorkerTripNumber	183.00	100.00
tblTripsAndVMT	WorkerTripNumber	183.00	180.00
tblTripsAndVMT	WorkerTripNumber	37.00	200.00
tblTripsAndVMT	WorkerTripNumber	18.00	40.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	7.93
tblVehicleTrips	CC_TTP	64.10	0.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	16.90	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	HO_TL	8.70	0.00
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	0.00
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	0.00
tblVehicleTrips	HW_TTP	40.20	0.00

tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PR_TP	86.00	0.00
tblVehicleTrips	PR_TP	52.00	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	2.20	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	0.00	400.00
tblVehicleTrips	SU_TR	2.44	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	0.00	400.00
tblVehicleTrips	WD_TR	2.74	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	0.00	400.00
tblWater	IndoorWaterUseRate	2,984,363.05	865,264.20
tblWater	OutdoorWaterUseRate	1,829,125.74	530,323.22
tblWoodstoves	NumberCatalytic	9.60	0.00
tblWoodstoves	NumberNoncatalytic	9.60	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.6592	111.5749	64.2532	0.2572	11.5936	2.1087	13.1205	4.8135	1.9789	6.2328						
2022	3.0452	22.8804	26.8508	0.0639	2.3321	0.9284	3.2605	0.6258	0.8891	1.5148						
2023	11.2638	20.3587	26.0839	0.0628	2.5557	0.8043	3.1694	0.6850	0.7699	1.3957						
Maximum	**11.2638**	**111.5749**	**64.2532**	**0.2572**	**11.5936**	**2.1087**	**13.1205**	**4.8135**	**1.9789**	**6.2328**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.6592	111.5749	64.2532	0.2572	7.8202	2.1087	9.3471	2.7801	1.9789	4.1994						
2022	3.0452	22.8804	26.8508	0.0639	2.3321	0.9284	3.2605	0.6258	0.8891	1.5148						
2023	11.2638	20.3587	26.0839	0.0628	2.5557	0.8043	3.1694	0.6850	0.7699	1.3957						

Maximum	**11.2638**	**111.5749**	**64.2532**	**0.2572**	**7.8202**	**2.1087**	**9.3471**	**2.7801**	**1.9789**	**4.1994**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**22.90**	**0.00**	**19.30**	**33.20**	**0.00**	**22.24**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.6951	0.5146	16.0045	2.9600e-003		0.1146	0.1146		0.1146	0.1146						
Energy	0.0793	0.6921	0.3962	4.3200e-003		0.0548	0.0548		0.0548	0.0548						
Mobile	0.5938	2.5603	7.5086	0.0280	2.4544	0.0217	2.4762	0.6568	0.0202	0.6770						
Stationary	0.4923	1.3760	1.2553	2.3700e-003		0.0724	0.0724		0.0724	0.0724						
Total	**6.8605**	**5.1431**	**25.1646**	**0.0377**	**2.4544**	**0.2635**	**2.7179**	**0.6568**	**0.2620**	**0.9188**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.6951	0.5146	16.0045	2.9600e-003		0.1146	0.1146		0.1146	0.1146						
Energy	0.0748	0.6524	0.3716	4.0800e-003		0.0517	0.0517		0.0517	0.0517						
Mobile	0.5938	2.5603	7.5086	0.0280	2.4544	0.0217	2.4762	0.6568	0.0202	0.6770						
Stationary	0.4923	1.3760	1.2553	2.3700e-003		0.0724	0.0724		0.0724	0.0724						
Total	**6.8560**	**5.1033**	**25.1400**	**0.0374**	**2.4544**	**0.2604**	**2.7148**	**0.6568**	**0.2589**	**0.9157**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.07**	**0.77**	**0.10**	**0.64**	**0.00**	**1.18**	**0.11**	**0.00**	**1.19**	**0.34**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	2/26/2021	5	41	
2	Grading	Grading	3/1/2021	5/31/2021	5	66	
3	Mat Foundation	Building Construction	6/1/2021	6/2/2021	5	2	
4	Foundation	Building Construction	6/3/2021	12/31/2021	5	152	
5	Building Construction	Building Construction	1/1/2022	2/28/2023	5	302	

6	Architectural Coating	Architectural Coating	3/1/2023	9/30/2023	5	153	
7	Paving	Paving	10/1/2023	10/31/2023	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2.22

Acres of Paving: 0

Residential Indoor: 388,800; Residential Outdoor: 129,600; Non-Residential Indoor: 21,945; Non-Residential Outdoor: 7,315; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Air Compressors	1	8.00	78	0.48
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Other Construction Equipment	1	2.00	172	0.42
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Rubber Tired Loaders	2	8.00	203	0.36
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	2	8.00	158	0.38
Grading	Forklifts	1	8.00	89	0.20
Grading	Graders	0	8.00	187	0.41
Grading	Other Construction Equipment	1	2.00	172	0.42
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Welders	1	8.00	46	0.45
Mat Foundation	Cement and Mortar Mixers	2	8.00	9	0.56
Mat Foundation	Cranes	0	7.00	231	0.29
Mat Foundation	Forklifts	0	8.00	89	0.20
Mat Foundation	Generator Sets	0	8.00	84	0.74
Mat Foundation	Pumps	4	8.00	84	0.74
Mat Foundation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Mat Foundation	Welders	2	8.00	46	0.45
Foundation	Concrete/Industrial Saws	1	8.00	81	0.73
Foundation	Cranes	1	8.00	231	0.29
Foundation	Forklifts	2	8.00	89	0.20
Foundation	Graders	0	8.00	187	0.41
Foundation	Plate Compactors	4	8.00	8	0.43
Foundation	Pumps	2	8.00	84	0.74
Foundation	Rough Terrain Forklifts	2	8.00	100	0.40
Foundation	Rubber Tired Dozers	0	8.00	247	0.40
Foundation	Scrapers	0	8.00	367	0.48
Foundation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Foundation	Welders	2	8.00	46	0.45
Building Construction	Aerial Lifts	2	8.00	63	0.31
Building Construction	Air Compressors	2	8.00	78	0.48
Building Construction	Concrete/Industrial Saws	1	8.00	81	0.73

Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Aerial Lifts	4	8.00	63	0.31
Architectural Coating	Air Compressors	4	8.00	78	0.48
Architectural Coating	Forklifts	3	8.00	89	0.20
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Plate Compactors	1	8.00	8	0.43
Paving	Rollers	0	8.00	80	0.38
Paving	Skid Steer Loaders	2	8.00	65	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Trenchers	1	8.00	78	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	30.00	10.00	820.00	14.70	6.90	35.40	LD_Mix	HDT_Mix	HHDT
Grading	9	30.00	10.00	10,686.00	14.70	6.90	35.40	LD_Mix	HDT_Mix	HHDT
Mat Foundation	8	30.00	400.00	0.00	14.70	6.90	20.00	LD_Mix	HHDT	HHDT
Foundation	14	100.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	180.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	11	200.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	40.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4487	0.0000	1.4487	0.2193	0.0000	0.2193						
Off-Road	4.3198	42.6685	26.5787	0.0538		2.0751	2.0751		1.9468	1.9468						
Total	**4.3198**	**42.6685**	**26.5787**	**0.0538**	**1.4487**	**2.0751**	**3.5238**	**0.2193**	**1.9468**	**2.1662**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2748	8.2318	2.1202	0.0257	0.6187	0.0288	0.6475	0.1696	0.0276	0.1972						
Vendor	0.0319	0.9689	0.2808	2.5000e-003	0.0640	2.0500e-003	0.0661	0.0184	1.9600e-003	0.0204						
Worker	0.1431	0.0978	1.1048	3.2300e-003	0.3353	2.7100e-003	0.3380	0.0889	2.5000e-003	0.0914						
Total	**0.4497**	**9.2985**	**3.5057**	**0.0315**	**1.0180**	**0.0336**	**1.0516**	**0.2769**	**0.0321**	**0.3090**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5650	0.0000	0.5650	0.0855	0.0000	0.0855						
Off-Road	4.3198	42.6685	26.5787	0.0538		2.0751	2.0751		1.9468	1.9468						
Total	**4.3198**	**42.6685**	**26.5787**	**0.0538**	**0.5650**	**2.0751**	**2.6401**	**0.0855**	**1.9468**	**2.0324**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2748	8.2318	2.1202	0.0257	0.6187	0.0288	0.6475	0.1696	0.0276	0.1972						
Vendor	0.0319	0.9689	0.2808	2.5000e-003	0.0640	2.0500e-003	0.0661	0.0184	1.9600e-003	0.0204						
Worker	0.1431	0.0978	1.1048	3.2300e-003	0.3353	2.7100e-003	0.3380	0.0889	2.5000e-003	0.0914						
Total	**0.4497**	**9.2985**	**3.5057**	**0.0315**	**1.0180**	**0.0336**	**1.0516**	**0.2769**	**0.0321**	**0.3090**						

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1859	0.0000	6.1859	3.3335	0.0000	3.3335						
Off-Road	2.8301	27.8437	20.4147	0.0433		1.2887	1.2887		1.1915	1.1915						
Total	**2.8301**	**27.8437**	**20.4147**	**0.0433**	**6.1859**	**1.2887**	**7.4746**	**3.3335**	**1.1915**	**4.5250**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2243	66.6402	17.1639	0.2082	5.0083	0.2335	5.2418	1.3726	0.2234	1.5960						
Vendor	0.0319	0.9689	0.2808	2.5000e-003	0.0640	2.0500e-003	0.0661	0.0184	1.9600e-003	0.0204						
Worker	0.1431	0.0978	1.1048	3.2300e-003	0.3353	2.7100e-003	0.3380	0.0889	2.5000e-003	0.0914						
Total	**2.3992**	**67.7069**	**18.5494**	**0.2139**	**5.4077**	**0.2383**	**5.6459**	**1.4800**	**0.2279**	**1.7078**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4125	0.0000	2.4125	1.3001	0.0000	1.3001						
Off-Road	2.8301	27.8437	20.4147	0.0433		1.2887	1.2887		1.1915	1.1915						
Total	**2.8301**	**27.8437**	**20.4147**	**0.0433**	**2.4125**	**1.2887**	**3.7012**	**1.3001**	**1.1915**	**2.4916**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2243	66.6402	17.1639	0.2082	5.0083	0.2335	5.2418	1.3726	0.2234	1.5960						
Vendor	0.0319	0.9689	0.2808	2.5000e-003	0.0640	2.0500e-003	0.0661	0.0184	1.9600e-003	0.0204						
Worker	0.1431	0.0978	1.1048	3.2300e-003	0.3353	2.7100e-003	0.3380	0.0889	2.5000e-003	0.0914						
Total	**2.3992**	**67.7069**	**18.5494**	**0.2139**	**5.4077**	**0.2383**	**5.6459**	**1.4800**	**0.2279**	**1.7078**						

3.4 Mat Foundation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2445	16.5942	19.0169	0.0328		0.8873	0.8873		0.8873	0.8873						
Total	**2.2445**	**16.5942**	**19.0169**	**0.0328**		**0.8873**	**0.8873**		**0.8873**	**0.8873**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	1.6464	60.9548	13.2996	0.1300	2.4185	0.1280	2.5465	0.6635	0.1225	0.7859						
Worker	0.1431	0.0978	1.1048	3.2300e-003	0.3353	2.7100e-003	0.3380	0.0889	2.5000e-003	0.0914						
Total	**1.7894**	**61.0527**	**14.4044**	**0.1332**	**2.7539**	**0.1307**	**2.8846**	**0.7524**	**0.1250**	**0.8774**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2445	16.5942	19.0169	0.0328		0.8873	0.8873		0.8873	0.8873						
Total	**2.2445**	**16.5942**	**19.0169**	**0.0328**		**0.8873**	**0.8873**		**0.8873**	**0.8873**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	1.6464	60.9548	13.2996	0.1300	2.4185	0.1280	2.5465	0.6635	0.1225	0.7859						
Worker	0.1431	0.0978	1.1048	3.2300e-003	0.3353	2.7100e-003	0.3380	0.0889	2.5000e-003	0.0914						
Total	**1.7894**	**61.0527**	**14.4044**	**0.1332**	**2.7539**	**0.1307**	**2.8846**	**0.7524**	**0.1250**	**0.8774**						

3.5 Foundation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	2.8294	23.9130	24.3417	0.0422		1.2048	1.2048		1.1657	1.1657						
Total	**2.8294**	**23.9130**	**24.3417**	**0.0422**		**1.2048**	**1.2048**		**1.1657**	**1.1657**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.3191	9.6889	2.8077	0.0250	0.6402	0.0205	0.6607	0.1843	0.0196	0.2039						
Worker	0.4768	0.3262	3.6826	0.0108	1.1178	9.0300e-003	1.1268	0.2964	8.3200e-003	0.3048						
Total	**0.7959**	**10.0150**	**6.4903**	**0.0358**	**1.7580**	**0.0295**	**1.7875**	**0.4808**	**0.0279**	**0.5087**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8294	23.9130	24.3417	0.0422		1.2048	1.2048		1.1657	1.1657						
Total	**2.8294**	**23.9130**	**24.3417**	**0.0422**		**1.2048**	**1.2048**		**1.1657**	**1.1657**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.3191	9.6889	2.8077	0.0250	0.6402	0.0205	0.6607	0.1843	0.0196	0.2039						
Worker	0.4768	0.3262	3.6826	0.0108	1.1178	9.0300e-003	1.1268	0.2964	8.3200e-003	0.3048						
Total	**0.7959**	**10.0150**	**6.4903**	**0.0358**	**1.7580**	**0.0295**	**1.7875**	**0.4808**	**0.0279**	**0.5087**						

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0893	17.7463	19.4167	0.0328		0.9037	0.9037		0.8660	0.8660						
Total	**2.0893**	**17.7463**	**19.4167**	**0.0328**		**0.9037**	**0.9037**		**0.8660**	**0.8660**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.1498	4.6040	1.3289	0.0124	0.3201	8.9600e-003	0.3291	0.0922	8.5700e-003	0.1007						
Worker	0.8061	0.5302	6.1052	0.0187	2.0120	0.0158	2.0277	0.5336	0.0145	0.5481						
Total	**0.9559**	**5.1341**	**7.4340**	**0.0311**	**2.3321**	**0.0247**	**2.3568**	**0.6258**	**0.0231**	**0.6488**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0893	17.7463	19.4167	0.0328		0.9037	0.9037		0.8660	0.8660						
Total	**2.0893**	**17.7463**	**19.4167**	**0.0328**		**0.9037**	**0.9037**		**0.8660**	**0.8660**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.1498	4.6040	1.3289	0.0124	0.3201	8.9600e-003	0.3291	0.0922	8.5700e-003	0.1007						
Worker	0.8061	0.5302	6.1052	0.0187	2.0120	0.0158	2.0277	0.5336	0.0145	0.5481						
Total	**0.9559**	**5.1341**	**7.4340**	**0.0311**	**2.3321**	**0.0247**	**2.3568**	**0.6258**	**0.0231**	**0.6488**						

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9411	16.3922	19.2912	0.0328		0.7848	0.7848		0.7518	0.7518						
Total	**1.9411**	**16.3922**	**19.2912**	**0.0328**		**0.7848**	**0.7848**		**0.7518**	**0.7518**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.1113	3.4869	1.1808	0.0120	0.3201	4.2600e-003	0.3244	0.0922	4.0700e-003	0.0962						
Worker	0.7594	0.4795	5.6118	0.0180	2.0120	0.0153	2.0273	0.5336	0.0141	0.5477						
Total	**0.8707**	**3.9665**	**6.7926**	**0.0300**	**2.3321**	**0.0196**	**2.3517**	**0.6258**	**0.0182**	**0.6439**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9411	16.3922	19.2912	0.0328		0.7848	0.7848		0.7518	0.7518						
Total	**1.9411**	**16.3922**	**19.2912**	**0.0328**		**0.7848**	**0.7848**		**0.7518**	**0.7518**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.1113	3.4869	1.1808	0.0120	0.3201	4.2600e-003	0.3244	0.0922	4.0700e-003	0.0962						
Worker	0.7594	0.4795	5.6118	0.0180	2.0120	0.0153	2.0273	0.5336	0.0141	0.5477						

Total	**0.8707**	**3.9665**	**6.7926**	**0.0300**	**2.3321**	**0.0196**	**2.3517**	**0.6258**	**0.0182**	**0.6439**						

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.8404					0.0000	0.0000		0.0000	0.0000						
Off-Road	1.4683	11.9613	17.4617	0.0272		0.5925	0.5925		0.5753	0.5753						
Total	**10.3087**	**11.9613**	**17.4617**	**0.0272**		**0.5925**	**0.5925**		**0.5753**	**0.5753**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.1113	3.4869	1.1808	0.0120	0.3201	4.2600e-003	0.3244	0.0922	4.0700e-003	0.0962						
Worker	0.8438	0.5328	6.2353	0.0200	2.2355	0.0170	2.2525	0.5929	0.0157	0.6085						
Total	**0.9551**	**4.0197**	**7.4162**	**0.0320**	**2.5557**	**0.0213**	**2.5769**	**0.6850**	**0.0197**	**0.7048**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.8404					0.0000	0.0000		0.0000	0.0000						
Off-Road	1.4683	11.9613	17.4617	0.0272		0.5925	0.5925		0.5753	0.5753						
Total	**10.3087**	**11.9613**	**17.4617**	**0.0272**		**0.5925**	**0.5925**		**0.5753**	**0.5753**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						

Vendor	0.1113	3.4869	1.1808	0.0120	0.3201	4.2600e-003	0.3244	0.0922	4.0700e-003	0.0962						
Worker	0.8438	0.5328	6.2353	0.0200	2.2355	0.0170	2.2525	0.5929	0.0157	0.6085						
Total	**0.9551**	**4.0197**	**7.4162**	**0.0320**	**2.5557**	**0.0213**	**2.5769**	**0.6850**	**0.0197**	**0.7048**						

3.8 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8978	8.7206	10.6697	0.0159		0.4606	0.4606		0.4257	0.4257						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
Total	**0.8978**	**8.7206**	**10.6697**	**0.0159**		**0.4606**	**0.4606**		**0.4257**	**0.4257**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0445	1.3948	0.4723	4.7900e-003	0.1281	1.7000e-003	0.1298	0.0369	1.6300e-003	0.0385						
Worker	0.1688	0.1066	1.2471	4.0000e-003	0.4471	3.4000e-003	0.4505	0.1186	3.1300e-003	0.1217						
Total	**0.2133**	**1.5013**	**1.7194**	**8.7900e-003**	**0.5752**	**5.1000e-003**	**0.5803**	**0.1554**	**4.7600e-003**	**0.1602**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8978	8.7206	10.6697	0.0159		0.4606	0.4606		0.4257	0.4257						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
Total	**0.8978**	**8.7206**	**10.6697**	**0.0159**		**0.4606**	**0.4606**		**0.4257**	**0.4257**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0445	1.3948	0.4723	4.7900e-003	0.1281	1.7000e-003	0.1298	0.0369	1.6300e-003	0.0385						
Worker	0.1688	0.1066	1.2471	4.0000e-003	0.4471	3.4000e-003	0.4505	0.1186	3.1300e-003	0.1217						
Total	**0.2133**	**1.5013**	**1.7194**	**8.7900e-003**	**0.5752**	**5.1000e-003**	**0.5803**	**0.1554**	**4.7600e-003**	**0.1602**						

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5938	2.5603	7.5086	0.0280	2.4544	0.0217	2.4762	0.6568	0.0202	0.6770						
Unmitigated	0.5938	2.5603	7.5086	0.0280	2.4544	0.0217	2.4762	0.6568	0.0202	0.6770						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
User Defined Commercial	400.00	400.00	400.00	1,154,244	1,154,244
Total	400.00	400.00	400.00	1,154,244	1,154,244

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted Living)	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
User Defined Commercial	0.00	7.93	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Enclosed Parking with Elevator	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Health Club	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
User Defined Commercial	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0748	0.6524	0.3716	4.0800e-003		0.0517	0.0517		0.0517	0.0517						
NaturalGas Unmitigated	0.0793	0.6921	0.3962	4.3200e-003		0.0548	0.0548		0.0548	0.0548						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	4848.36	0.0523	0.4468	0.1901	2.8500e-003		0.0361	0.0361		0.0361	0.0361						
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Health Club	2502.41	0.0270	0.2453	0.2061	1.4700e-003		0.0187	0.0187		0.0187	0.0187						
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0793**	**0.6921**	**0.3962**	**4.3200e-003**		**0.0548**	**0.0548**		**0.0548**	**0.0548**						

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	4.61765	0.0498	0.4256	0.1811	2.7200e-003		0.0344	0.0344		0.0344	0.0344						
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Health Club	2.31369	0.0250	0.2268	0.1905	1.3600e-003		0.0172	0.0172		0.0172	0.0172						
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0748**	**0.6524**	**0.3716**	**4.0800e-003**		**0.0517**	**0.0517**		**0.0517**	**0.0517**						

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.6951	0.5146	16.0045	2.9600e-003		0.1146	0.1146		0.1146	0.1146						
Unmitigated	5.6951	0.5146	16.0045	2.9600e-003		0.1146	0.1146		0.1146	0.1146						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3706					0.0000	0.0000		0.0000	0.0000						
Consumer Products	4.8066					0.0000	0.0000		0.0000	0.0000						
Hearth	0.0388	0.3318	0.1412	2.1200e-003		0.0268	0.0268		0.0268	0.0268						
Landscaping	0.4791	0.1828	15.8633	8.4000e-004		0.0878	0.0878		0.0878	0.0878						
Total	**5.6951**	**0.5146**	**16.0045**	**2.9600e-003**		**0.1146**	**0.1146**		**0.1146**	**0.1146**						

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3706					0.0000	0.0000		0.0000	0.0000						
Consumer Products	4.8066					0.0000	0.0000		0.0000	0.0000						
Hearth	0.0388	0.3318	0.1412	2.1200e-003		0.0268	0.0268		0.0268	0.0268						
Landscaping	0.4791	0.1828	15.8633	8.4000e-004		0.0878	0.0878		0.0878	0.0878						
Total	**5.6951**	**0.5146**	**16.0045**	**2.9600e-003**		**0.1146**	**0.1146**		**0.1146**	**0.1146**						

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	12	300	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (300 - 600 HP)	0.4923	1.3760	1.2553	2.3700e-003		0.0724	0.0724		0.0724	0.0724						
Total	**0.4923**	**1.3760**	**1.2553**	**2.3700e-003**		**0.0724**	**0.0724**		**0.0724**	**0.0724**						

11.0 Vegetation

Bellwood - Project Construction and Operations

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	140.00	Space	0.00	56,000.00	0
Health Club	50.46	1000sqft	1.16	50,463.00	0
Congregate Care (Assisted Living)	192.00	Dwelling Unit	2.22	191,291.00	549

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2023
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	678	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP SB100 RPS - 2023 Buildout Year - 678 lbs CO2/MWh

Land Use - site specific. Includes 50,560 sf of indoor common areas.
241,754 SF of floor area

Construction Phase - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - see assumptions

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Trips and VMT - Site Specific

Demolition - Existing uses = 43,939 SF
Parking/Pavement = 16,400 SF

Grading - 2.22 acres

Woodstoves - No Wood Stoves
Assumes limited fire places throughout Project site

Energy Use - see parking garage ventilation calculations

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - City of LA 2012 Waste Diversion Rate

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	25,232.00	7,315.00

tblArchitecturalCoating	ConstArea_Nonresidential_Interior	75,695.00	21,945.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	129,121.00	129,600.00
tblArchitecturalCoating	ConstArea_Residential_Interior	387,364.00	388,800.00
tblAreaCoating	Area_Nonresidential_Exterior	25232	7315
tblAreaCoating	Area_Nonresidential_Interior	75695	21945
tblAreaCoating	Area_Residential_Exterior	129121	129600
tblAreaCoating	Area_Residential_Interior	387364	388800
tblConstructionPhase	NumDays	18.00	153.00
tblConstructionPhase	NumDays	230.00	2.00
tblConstructionPhase	NumDays	230.00	152.00
tblConstructionPhase	NumDays	230.00	302.00
tblConstructionPhase	NumDays	20.00	41.00
tblConstructionPhase	NumDays	8.00	66.00
tblConstructionPhase	NumDays	18.00	22.00
tblEnergyUse	LightingElect	1.75	2.33
tblEnergyUse	T24E	3.92	0.41
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	163.20	20.00
tblFireplaces	NumberWood	9.60	0.00
tblGrading	AcresOfGrading	0.00	2.22
tblGrading	MaterialExported	0.00	74,800.00
tblLandUse	LandUseSquareFeet	50,460.00	50,463.00
tblLandUse	LandUseSquareFeet	192,000.00	191,291.00
tblLandUse	LotAcreage	1.26	0.00
tblLandUse	LotAcreage	12.00	2.22
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00

tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	678
tblSolidWaste	SolidWasteGenerationRate	287.62	83.39
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblTripsAndVMT	HaulingTripNumber	274.00	820.00
tblTripsAndVMT	HaulingTripNumber	9,350.00	10,686.00
tblTripsAndVMT	VendorTripLength	6.90	0.10
tblTripsAndVMT	VendorTripLength	6.90	0.10
tblTripsAndVMT	VendorTripLength	6.90	0.10
tblTripsAndVMT	VendorTripLength	6.90	0.10
tblTripsAndVMT	VendorTripLength	6.90	0.10
tblTripsAndVMT	VendorTripLength	6.90	0.10
tblTripsAndVMT	VendorTripLength	6.90	0.10
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	38.00	400.00
tblTripsAndVMT	VendorTripNumber	38.00	100.00
tblTripsAndVMT	VendorTripNumber	38.00	50.00
tblTripsAndVMT	VendorTripNumber	0.00	50.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	WorkerTripLength	14.70	0.10
tblTripsAndVMT	WorkerTripLength	14.70	0.10
tblTripsAndVMT	WorkerTripLength	14.70	0.10
tblTripsAndVMT	WorkerTripLength	14.70	0.10
tblTripsAndVMT	WorkerTripLength	14.70	0.10
tblTripsAndVMT	WorkerTripLength	14.70	0.10
tblTripsAndVMT	WorkerTripLength	14.70	0.10
tblTripsAndVMT	WorkerTripNumber	25.00	30.00
tblTripsAndVMT	WorkerTripNumber	23.00	30.00
tblTripsAndVMT	WorkerTripNumber	183.00	30.00
tblTripsAndVMT	WorkerTripNumber	183.00	100.00
tblTripsAndVMT	WorkerTripNumber	183.00	180.00
tblTripsAndVMT	WorkerTripNumber	37.00	200.00
tblTripsAndVMT	WorkerTripNumber	18.00	40.00
tblVehicleTrips	ST_TR	2.20	2.17
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	SU_TR	2.44	2.41
tblVehicleTrips	SU_TR	26.73	0.00

tblVehicleTrips	WD_TR	2.74	2.71
tblVehicleTrips	WD_TR	32.93	0.00
tblWater	IndoorWaterUseRate	2,984,363.05	865,264.20
tblWater	OutdoorWaterUseRate	1,829,125.74	530,323.22
tblWoodstoves	NumberCatalytic	9.60	0.00
tblWoodstoves	NumberNoncatalytic	9.60	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	6.0768	82.4549	51.9225	0.1189	6.2073	2.0767	7.5049	3.3397	1.9483	4.5398	0.0000	11,655.0544	11,655.0544	1.6767	0.0000	11,696.9716
2022	2.3185	20.5736	20.9064	0.0359	0.0214	0.9062	0.9276	6.1800e-003	0.8683	0.8745	0.0000	3,434.4319	3,434.4319	0.6583	0.0000	3,450.8903
2023	10.5267	18.8620	20.6183	0.0358	0.0231	0.7868	0.8082	6.6600e-003	0.7537	0.7599	0.0000	3,420.5098	3,420.5098	0.6399	0.0000	3,436.5063
Maximum	**10.5267**	**82.4549**	**51.9225**	**0.1189**	**6.2073**	**2.0767**	**7.5049**	**3.3397**	**1.9483**	**4.5398**	**0.0000**	**11,655.0544**	**11,655.0544**	**1.6767**	**0.0000**	**11,696.9716**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	6.0768	82.4549	51.9225	0.1189	2.4339	2.0767	3.7315	1.3063	1.9483	2.5063	0.0000	11,655.0544	11,655.0544	1.6767	0.0000	11,696.9716
2022	2.3185	20.5736	20.9064	0.0359	0.0214	0.9062	0.9276	6.1800e-003	0.8683	0.8745	0.0000	3,434.4319	3,434.4319	0.6583	0.0000	3,450.8903
2023	10.5267	18.8620	20.6183	0.0358	0.0231	0.7868	0.8082	6.6600e-003	0.7537	0.7599	0.0000	3,420.5098	3,420.5098	0.6399	0.0000	3,436.5063
Maximum	**10.5267**	**82.4549**	**51.9225**	**0.1189**	**2.4339**	**2.0767**	**3.7315**	**1.3063**	**1.9483**	**2.5063**	**0.0000**	**11,655.0544**	**11,655.0544**	**1.6767**	**0.0000**	**11,696.9716**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**60.36**	**0.00**	**40.84**	**60.65**	**0.00**	**32.94**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	2/26/2021	5	41	

2	Grading	Grading	3/1/2021	5/31/2021	5	66	
3	Mat Foundation	Building Construction	6/1/2021	6/2/2021	5	2	
4	Foundation	Building Construction	6/3/2021	12/31/2021	5	152	
5	Building Construction	Building Construction	1/1/2022	2/28/2023	5	302	
6	Architectural Coating	Architectural Coating	3/1/2023	9/30/2023	5	153	
7	Paving	Paving	10/1/2023	10/31/2023	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2.22

Acres of Paving: 0

Residential Indoor: 388,800; Residential Outdoor: 129,600; Non-Residential Indoor: 21,945; Non-Residential Outdoor: 7,315; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Air Compressors	1	8.00	78	0.48
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Other Construction Equipment	1	2.00	172	0.42
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Rubber Tired Loaders	2	8.00	203	0.36
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	2	8.00	158	0.38
Grading	Forklifts	1	8.00	89	0.20
Grading	Graders	0	8.00	187	0.41
Grading	Other Construction Equipment	1	2.00	172	0.42
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Welders	1	8.00	46	0.45
Mat Foundation	Cement and Mortar Mixers	2	8.00	9	0.56
Mat Foundation	Cranes	0	7.00	231	0.29
Mat Foundation	Forklifts	0	8.00	89	0.20
Mat Foundation	Generator Sets	0	8.00	84	0.74
Mat Foundation	Pumps	4	8.00	84	0.74
Mat Foundation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Mat Foundation	Welders	2	8.00	46	0.45
Foundation	Concrete/Industrial Saws	1	8.00	81	0.73
Foundation	Cranes	1	8.00	231	0.29
Foundation	Forklifts	2	8.00	89	0.20
Foundation	Graders	0	8.00	187	0.41
Foundation	Plate Compactors	4	8.00	8	0.43
Foundation	Pumps	2	8.00	84	0.74
Foundation	Rough Terrain Forklifts	2	8.00	100	0.40
Foundation	Rubber Tired Dozers	0	8.00	247	0.40
Foundation	Scrapers	0	8.00	367	0.48
Foundation	Tractors/Loaders/Backhoes	0	7.00	97	0.37

Foundation	Welders	2	8.00	46	0.45
Building Construction	Aerial Lifts	2	8.00	63	0.31
Building Construction	Air Compressors	2	8.00	78	0.48
Building Construction	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Aerial Lifts	4	8.00	63	0.31
Architectural Coating	Air Compressors	4	8.00	78	0.48
Architectural Coating	Forklifts	3	8.00	89	0.20
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Plate Compactors	1	8.00	8	0.43
Paving	Rollers	0	8.00	80	0.38
Paving	Skid Steer Loaders	2	8.00	65	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Trenchers	1	8.00	78	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	30.00	10.00	820.00	0.10	0.10	0.10	LD_Mix	HDT_Mix	HHDT
Grading	9	30.00	10.00	10,686.00	0.10	0.10	0.10	LD_Mix	HDT_Mix	HHDT
Mat Foundation	8	30.00	400.00	0.00	0.10	0.10	0.10	LD_Mix	HHDT	HHDT
Foundation	14	100.00	100.00	0.00	0.10	0.10	0.10	LD_Mix	HDT_Mix	HHDT
Building Construction	11	180.00	50.00	0.00	0.10	0.10	0.10	LD_Mix	HDT_Mix	HHDT
Architectural Coating	11	200.00	50.00	0.00	0.10	0.10	0.10	LD_Mix	HDT_Mix	HHDT
Paving	7	40.00	20.00	0.00	0.10	0.10	0.10	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4487	0.0000	1.4487	0.2193	0.0000	0.2193			0.0000			0.0000
Off-Road	4.3198	42.6685	26.5787	0.0538		2.0751	2.0751		1.9468	1.9468		5,177.1815	5,177.1815	1.2643		5,208.7880
Total	**4.3198**	**42.6685**	**26.5787**	**0.0538**	**1.4487**	**2.0751**	**3.5238**	**0.2193**	**1.9468**	**2.1662**		**5,177.1815**	**5,177.1815**	**1.2643**		**5,208.7880**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0364	1.8108	0.3178	1.9100e-003	2.1700e-003	1.0500e-003	3.2200e-003	6.3000e-004	1.0000e-003	1.6300e-003		206.6272	206.6272	0.0356		207.5182
Vendor	0.0149	0.5692	0.1624	5.2000e-004	1.1900e-003	2.9000e-004	1.4700e-003	3.7000e-004	2.7000e-004	6.4000e-004		56.2484	56.2484	9.7200e-003		56.4913
Worker	0.0291	8.9400e-003	0.1348	9.0000e-005	2.5800e-003	2.1000e-004	2.7800e-003	7.2000e-004	1.9000e-004	9.1000e-004		8.7572	8.7572	7.2000e-004		8.7753
Total	**0.0804**	**2.3890**	**0.6150**	**2.5200e-003**	**5.9400e-003**	**1.5500e-003**	**7.4700e-003**	**1.7200e-003**	**1.4600e-003**	**3.1800e-003**		**271.6328**	**271.6328**	**0.0461**		**272.7848**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5650	0.0000	0.5650	0.0855	0.0000	0.0855			0.0000			0.0000
Off-Road	4.3198	42.6685	26.5787	0.0538		2.0751	2.0751		1.9468	1.9468	0.0000	5,177.1814	5,177.1814	1.2643		5,208.7880
Total	**4.3198**	**42.6685**	**26.5787**	**0.0538**	**0.5650**	**2.0751**	**2.6401**	**0.0855**	**1.9468**	**2.0324**	**0.0000**	**5,177.1814**	**5,177.1814**	**1.2643**		**5,208.7880**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0364	1.8108	0.3178	1.9100e-003	2.1700e-003	1.0500e-003	3.2200e-003	6.3000e-004	1.0000e-003	1.6300e-003		206.6272	206.6272	0.0356		207.5182
Vendor	0.0149	0.5692	0.1624	5.2000e-004	1.1900e-003	2.9000e-004	1.4700e-003	3.7000e-004	2.7000e-004	6.4000e-004		56.2484	56.2484	9.7200e-003		56.4913
Worker	0.0291	8.9400e-003	0.1348	9.0000e-005	2.5800e-003	2.1000e-004	2.7800e-003	7.2000e-004	1.9000e-004	9.1000e-004		8.7572	8.7572	7.2000e-004		8.7753
Total	**0.0804**	**2.3890**	**0.6150**	**2.5200e-003**	**5.9400e-003**	**1.5500e-003**	**7.4700e-003**	**1.7200e-003**	**1.4600e-003**	**3.1800e-003**		**271.6328**	**271.6328**	**0.0461**		**272.7848**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1859	0.0000	6.1859	3.3335	0.0000	3.3335			0.0000			0.0000

Off-Road	2.8301	27.8437	20.4147	0.0433		1.2887	1.2887		1.1915	1.1915		4,151.0645	4,151.0645	1.3025		4,183.6258
Total	**2.8301**	**27.8437**	**20.4147**	**0.0433**	**6.1859**	**1.2887**	**7.4746**	**3.3335**	**1.1915**	**4.5250**		**4,151.0645**	**4,151.0645**	**1.3025**		**4,183.6258**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2947	14.6596	2.5725	0.0155	0.0176	8.4600e-003	0.0260	5.1200e-003	8.0900e-003	0.0132		1,672.7411	1,672.7411	0.2885		1,679.9544
Vendor	0.0149	0.5692	0.1624	5.2000e-004	1.1900e-003	2.9000e-004	1.4700e-003	3.7000e-004	2.7000e-004	6.4000e-004		56.2484	56.2484	9.7200e-003		56.4913
Worker	0.0291	8.9400e-003	0.1348	9.0000e-005	2.5800e-003	2.1000e-004	2.7800e-003	7.2000e-004	1.9000e-004	9.1000e-004		8.7572	8.7572	7.2000e-004		8.7753
Total	**0.3387**	**15.2378**	**2.8698**	**0.0161**	**0.0213**	**8.9600e-003**	**0.0303**	**6.2100e-003**	**8.5500e-003**	**0.0148**		**1,737.7467**	**1,737.7467**	**0.2990**		**1,745.2210**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4125	0.0000	2.4125	1.3001	0.0000	1.3001			0.0000			0.0000
Off-Road	2.8301	27.8437	20.4147	0.0433		1.2887	1.2887		1.1915	1.1915	0.0000	4,151.0645	4,151.0645	1.3025		4,183.6258
Total	**2.8301**	**27.8437**	**20.4147**	**0.0433**	**2.4125**	**1.2887**	**3.7012**	**1.3001**	**1.1915**	**2.4916**	**0.0000**	**4,151.0645**	**4,151.0645**	**1.3025**		**4,183.6258**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2947	14.6596	2.5725	0.0155	0.0176	8.4600e-003	0.0260	5.1200e-003	8.0900e-003	0.0132		1,672.7411	1,672.7411	0.2885		1,679.9544
Vendor	0.0149	0.5692	0.1624	5.2000e-004	1.1900e-003	2.9000e-004	1.4700e-003	3.7000e-004	2.7000e-004	6.4000e-004		56.2484	56.2484	9.7200e-003		56.4913
Worker	0.0291	8.9400e-003	0.1348	9.0000e-005	2.5800e-003	2.1000e-004	2.7800e-003	7.2000e-004	1.9000e-004	9.1000e-004		8.7572	8.7572	7.2000e-004		8.7753
Total	**0.3387**	**15.2378**	**2.8698**	**0.0161**	**0.0213**	**8.9600e-003**	**0.0303**	**6.2100e-003**	**8.5500e-003**	**0.0148**		**1,737.7467**	**1,737.7467**	**0.2990**		**1,745.2210**

3.4 Mat Foundation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Off-Road	2.2445	16.5942	19.0169	0.0328		0.8873	0.8873		0.8873	0.8873		3,008.1308	3,008.1308	0.2005		3,013.1424
Total	**2.2445**	**16.5942**	**19.0169**	**0.0328**		**0.8873**	**0.8873**		**0.8873**	**0.8873**		**3,008.1308**	**3,008.1308**	**0.2005**		**3,013.1424**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7281	36.2169	6.3555	0.0382	0.0434	0.0209	0.0643	0.0127	0.0200	0.0327		4,132.5440	4,132.5440	0.7128		4,150.3646
Worker	0.0291	8.9400e-003	0.1348	9.0000e-005	2.5800e-003	2.1000e-004	2.7800e-003	7.2000e-004	1.9000e-004	9.1000e-004		8.7572	8.7572	7.2000e-004		8.7753
Total	**0.7572**	**36.2258**	**6.4903**	**0.0383**	**0.0460**	**0.0211**	**0.0671**	**0.0134**	**0.0202**	**0.0336**		**4,141.3013**	**4,141.3013**	**0.7135**		**4,159.1399**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2445	16.5942	19.0169	0.0328		0.8873	0.8873		0.8873	0.8873	0.0000	3,008.1308	3,008.1308	0.2005		3,013.1424
Total	**2.2445**	**16.5942**	**19.0169**	**0.0328**		**0.8873**	**0.8873**		**0.8873**	**0.8873**	**0.0000**	**3,008.1308**	**3,008.1308**	**0.2005**		**3,013.1424**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7281	36.2169	6.3555	0.0382	0.0434	0.0209	0.0643	0.0127	0.0200	0.0327		4,132.5440	4,132.5440	0.7128		4,150.3646
Worker	0.0291	8.9400e-003	0.1348	9.0000e-005	2.5800e-003	2.1000e-004	2.7800e-003	7.2000e-004	1.9000e-004	9.1000e-004		8.7572	8.7572	7.2000e-004		8.7753
Total	**0.7572**	**36.2258**	**6.4903**	**0.0383**	**0.0460**	**0.0211**	**0.0671**	**0.0134**	**0.0202**	**0.0336**		**4,141.3013**	**4,141.3013**	**0.7135**		**4,159.1399**

3.5 Foundation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8294	23.9130	24.3417	0.0422		1.2048	1.2048		1.1657	1.1657		3,913.9480	3,913.9480	0.6631		3,930.5253
Total	**2.8294**	**23.9130**	**24.3417**	**0.0422**		**1.2048**	**1.2048**		**1.1657**	**1.1657**		**3,913.9480**	**3,913.9480**	**0.6631**		**3,930.5253**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1487	5.6921	1.6242	5.2400e-003	0.0119	2.8700e-003	0.0147	3.6900e-003	2.7500e-003	6.4400e-003		562.4836	562.4836	0.0972		564.9131
Worker	0.0970	0.0298	0.4495	3.0000e-004	8.5800e-003	7.0000e-004	9.2800e-003	2.4100e-003	6.4000e-004	3.0500e-003		29.1908	29.1908	2.4100e-003		29.2509
Total	**0.2457**	**5.7219**	**2.0736**	**5.5400e-003**	**0.0205**	**3.5700e-003**	**0.0240**	**6.1000e-003**	**3.3900e-003**	**9.4900e-003**		**591.6745**	**591.6745**	**0.0996**		**594.1641**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8294	23.9130	24.3417	0.0422		1.2048	1.2048		1.1657	1.1657	0.0000	3,913.9480	3,913.9480	0.6631		3,930.5253
Total	**2.8294**	**23.9130**	**24.3417**	**0.0422**		**1.2048**	**1.2048**		**1.1657**	**1.1657**	**0.0000**	**3,913.9480**	**3,913.9480**	**0.6631**		**3,930.5253**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1487	5.6921	1.6242	5.2400e-003	0.0119	2.8700e-003	0.0147	3.6900e-003	2.7500e-003	6.4400e-003		562.4836	562.4836	0.0972		564.9131
Worker	0.0970	0.0298	0.4495	3.0000e-004	8.5800e-003	7.0000e-004	9.2800e-003	2.4100e-003	6.4000e-004	3.0500e-003		29.1908	29.1908	2.4100e-003		29.2509
Total	**0.2457**	**5.7219**	**2.0736**	**5.5400e-003**	**0.0205**	**3.5700e-003**	**0.0240**	**6.1000e-003**	**3.3900e-003**	**9.4900e-003**		**591.6745**	**591.6745**	**0.0996**		**594.1641**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0893	17.7463	19.4167	0.0328		0.9037	0.9037		0.8660	0.8660		3,104.7623	3,104.7623	0.6086		3,119.9784
Total	**2.0893**	**17.7463**	**19.4167**	**0.0328**		**0.9037**	**0.9037**		**0.8660**	**0.8660**		**3,104.7623**	**3,104.7623**	**0.6086**		**3,119.9784**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0690	2.7800	0.7583	2.5900e-003	5.9400e-003	1.2200e-003	7.1500e-003	1.8500e-003	1.1600e-003	3.0100e-003		278.8959	278.8959	0.0459		280.0423
Worker	0.1603	0.0474	0.7314	5.2000e-004	0.0155	1.2200e-003	0.0167	4.3300e-003	1.1200e-003	5.4500e-003		50.7738	50.7738	3.8300e-003		50.8696
Total	**0.2292**	**2.8274**	**1.4897**	**3.1100e-003**	**0.0214**	**2.4400e-003**	**0.0238**	**6.1800e-003**	**2.2800e-003**	**8.4600e-003**		**329.6696**	**329.6696**	**0.0497**		**330.9120**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0893	17.7463	19.4167	0.0328		0.9037	0.9037		0.8660	0.8660	0.0000	3,104.7622	3,104.7622	0.6086		3,119.9783
Total	**2.0893**	**17.7463**	**19.4167**	**0.0328**		**0.9037**	**0.9037**		**0.8660**	**0.8660**	**0.0000**	**3,104.7622**	**3,104.7622**	**0.6086**		**3,119.9783**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0690	2.7800	0.7583	2.5900e-003	5.9400e-003	1.2200e-003	7.1500e-003	1.8500e-003	1.1600e-003	3.0100e-003		278.8959	278.8959	0.0459		280.0423

Worker	0.1603	0.0474	0.7314	5.2000e-004	0.0155	1.2200e-003	0.0167	4.3300e-003	1.1200e-003	5.4500e-003		50.7738	50.7738	3.8300e-003		50.8696
Total	**0.2292**	**2.8274**	**1.4897**	**3.1100e-003**	**0.0214**	**2.4400e-003**	**0.0238**	**6.1800e-003**	**2.2800e-003**	**8.4600e-003**		**329.6696**	**329.6696**	**0.0497**		**330.9120**

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9411	16.3922	19.2912	0.0328		0.7848	0.7848		0.7518	0.7518		3,105.0053	3,105.0053	0.5994		3,119.9914
Total	**1.9411**	**16.3922**	**19.2912**	**0.0328**		**0.7848**	**0.7848**		**0.7518**	**0.7518**		**3,105.0053**	**3,105.0053**	**0.5994**		**3,119.9914**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0541	2.4276	0.6649	2.4700e-003	5.9400e-003	8.3000e-004	6.7700e-003	1.8500e-003	7.9000e-004	2.6400e-003		266.5206	266.5206	0.0370		267.4461
Worker	0.1475	0.0421	0.6621	5.0000e-004	0.0155	1.2000e-003	0.0167	4.3300e-003	1.1000e-003	5.4300e-003		48.9838	48.9838	3.4000e-003		49.0688
Total	**0.2016**	**2.4697**	**1.3270**	**2.9700e-003**	**0.0214**	**2.0300e-003**	**0.0234**	**6.1800e-003**	**1.8900e-003**	**8.0700e-003**		**315.5045**	**315.5045**	**0.0404**		**316.5149**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9411	16.3922	19.2912	0.0328		0.7848	0.7848		0.7518	0.7518	0.0000	3,105.0053	3,105.0053	0.5994		3,119.9914
Total	**1.9411**	**16.3922**	**19.2912**	**0.0328**		**0.7848**	**0.7848**		**0.7518**	**0.7518**	**0.0000**	**3,105.0053**	**3,105.0053**	**0.5994**		**3,119.9914**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0541	2.4276	0.6649	2.4700e-003	5.9400e-003	8.3000e-004	6.7700e-003	1.8500e-003	7.9000e-004	2.6400e-003		266.5206	266.5206	0.0370		267.4461
Worker	0.1475	0.0421	0.6621	5.0000e-004	0.0155	1.2000e-003	0.0167	4.3300e-003	1.1000e-003	5.4300e-003		48.9838	48.9838	3.4000e-003		49.0688
Total	**0.2016**	**2.4697**	**1.3270**	**2.9700e-003**	**0.0214**	**2.0300e-003**	**0.0234**	**6.1800e-003**	**1.8900e-003**	**8.0700e-003**		**315.5045**	**315.5045**	**0.0404**		**316.5149**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.8404					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.4683	11.9613	17.4617	0.0272		0.5925	0.5925		0.5753	0.5753		2,595.6281	2,595.6281	0.4438		2,606.7234
Total	**10.3087**	**11.9613**	**17.4617**	**0.0272**		**0.5925**	**0.5925**		**0.5753**	**0.5753**		**2,595.6281**	**2,595.6281**	**0.4438**		**2,606.7234**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0541	2.4276	0.6649	2.4700e-003	5.9400e-003	8.3000e-004	6.7700e-003	1.8500e-003	7.9000e-004	2.6400e-003		266.5206	266.5206	0.0370		267.4461
Worker	0.1639	0.0468	0.7357	5.6000e-004	0.0172	1.3300e-003	0.0185	4.8100e-003	1.2200e-003	6.0400e-003		54.4265	54.4265	3.7700e-003		54.5209
Total	**0.2180**	**2.4744**	**1.4006**	**3.0300e-003**	**0.0231**	**2.1600e-003**	**0.0253**	**6.6600e-003**	**2.0100e-003**	**8.6800e-003**		**320.9471**	**320.9471**	**0.0408**		**321.9670**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.8404					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.4683	11.9613	17.4617	0.0272		0.5925	0.5925		0.5753	0.5753	0.0000	2,595.6281	2,595.6281	0.4438		2,606.7234
Total	**10.3087**	**11.9613**	**17.4617**	**0.0272**		**0.5925**	**0.5925**		**0.5753**	**0.5753**	**0.0000**	**2,595.6281**	**2,595.6281**	**0.4438**		**2,606.7234**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0541	2.4276	0.6649	2.4700e-003	5.9400e-003	8.3000e-004	6.7700e-003	1.8500e-003	7.9000e-004	2.6400e-003		266.5206	266.5206	0.0370		267.4461
Worker	0.1639	0.0468	0.7357	5.6000e-004	0.0172	1.3300e-003	0.0185	4.8100e-003	1.2200e-003	6.0400e-003		54.4265	54.4265	3.7700e-003		54.5209
Total	**0.2180**	**2.4744**	**1.4006**	**3.0300e-003**	**0.0231**	**2.1600e-003**	**0.0253**	**6.6600e-003**	**2.0100e-003**	**8.6800e-003**		**320.9471**	**320.9471**	**0.0408**		**321.9670**

3.8 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8978	8.7206	10.6697	0.0159		0.4606	0.4606		0.4257	0.4257		1,509.2116	1,509.2116	0.4694		1,520.9477
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8978**	**8.7206**	**10.6697**	**0.0159**		**0.4606**	**0.4606**		**0.4257**	**0.4257**		**1,509.2116**	**1,509.2116**	**0.4694**		**1,520.9477**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0216	0.9710	0.2660	9.9000e-004	2.3700e-003	3.3000e-004	2.7100e-003	7.4000e-004	3.2000e-004	1.0600e-003		106.6083	106.6083	0.0148		106.9784
Worker	0.0328	9.3600e-003	0.1471	1.1000e-004	3.4300e-003	2.7000e-004	3.7000e-003	9.6000e-004	2.4000e-004	1.2100e-003		10.8853	10.8853	7.5000e-004		10.9042
Total	**0.0544**	**0.9804**	**0.4131**	**1.1000e-003**	**5.8000e-003**	**6.0000e-004**	**6.4100e-003**	**1.7000e-003**	**5.6000e-004**	**2.2700e-003**		**117.4936**	**117.4936**	**0.0156**		**117.8826**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8978	8.7206	10.6697	0.0159		0.4606	0.4606		0.4257	0.4257	0.0000	1,509.2116	1,509.2116	0.4694		1,520.9477
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8978**	**8.7206**	**10.6697**	**0.0159**		**0.4606**	**0.4606**		**0.4257**	**0.4257**	**0.0000**	**1,509.2116**	**1,509.2116**	**0.4694**		**1,520.9477**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0216	0.9710	0.2660	9.9000e-004	2.3700e-003	3.3000e-004	2.7100e-003	7.4000e-004	3.2000e-004	1.0600e-003		106.6083	106.6083	0.0148		106.9784
Worker	0.0328	9.3600e-003	0.1471	1.1000e-004	3.4300e-003	2.7000e-004	3.7000e-003	9.6000e-004	2.4000e-004	1.2100e-003		10.8853	10.8853	7.5000e-004		10.9042
Total	**0.0544**	**0.9804**	**0.4131**	**1.1000e-003**	**5.8000e-003**	**6.0000e-004**	**6.4100e-003**	**1.7000e-003**	**5.6000e-004**	**2.2700e-003**		**117.4936**	**117.4936**	**0.0156**		**117.8826**

Bellwood

CO Hotspots

CO Hotspots Analysis - Maximum Impacted Intersection

Peak Hour Volumes		
Intersection	everly Glen and Santa Moni	
Direction	**AM**	**PM**
NBL	137	55
NBT	636	1019
NBR	678	385
SBL	218	664
SBT	1369	2030
SBR	188	299
EBL	437	151
EBT	712	689
EBR	132	118
WBL		
WBT	2075	1717
WBR	125	197
Peak Hour Totals	6707	7324
Daily Maximum	68,000	74,000

Bellwood Senior Residential Community

Draft EIR

Appendix C-3-Greenhouse Gas Emissions Worksheets and Modeling Output Files

- Appendix C-3: Greenhouse Gas Worksheets and Modeling Output Files
  - Appendix C-3.1: GHG Modeling Parameters and Summary of Emissions
    - GHG Emissions Summary
    - GHG Parameters and Summary
    - Electric Vehicle Charging Calculations
  - Appendix C-3.2: CalEEMod Outputs
    - Baseline Operations (Existing Year)
    - Baseline Operations (Buildout Year)
    - Project Construction and Operations (Buildout Year)

Bellwood Senior Housing

Operational Emissions Summary (GHG)

CalEEMod Output Summary	Project with PDFs	Project with no PDFs
Baseline (Buildout Year)[a]	**CO_2e**	**CO_2e**
Area	25	25
Energy (Natural Gas)	282	282
Mobile	482	482
Emergency Generators	0	0
Solid Waste	6	6
Water/Wastewater	55	55
Total	850	850
Buildout (Buildout Year)[b]		
Area	8	8
Energy (Natural Gas)	556	589
Mobile	479	634
Electric Vehicle Charging Credit	(33)	(33)
Emergency Generators	1	1
Solid Waste	31	31
Water/Wastewater	81	101
Construction	95	95
Total	1,217	1,425
Project (Buildout less Baseline)		
Area	(17)	(17)
Energy (Natural Gas)	274	307
Mobile	(3)	152
Electric Vehicle Charging Credit	(33)	(33)
Emergency Generators	1	1
Solid Waste	25	25
Water/Wastewater	26	46
Construction	95	95
Total	**367**	**575**

[a] Existing Uses

[b] Please refer to CalEEMod outputs for Future uses

GHG SOURCE CALCULATIONS:

ENERGY

Consistent with Section 120.6(c), Mandatory Requirements for Enclosed Parking Garages, the ventilation rate shall be at least 0.15 cfm/sq f when the garage is scheduled to be occupied.

Calculation of Parking Garage Ventilation Energy Factor

Full Power Ventilation Flowrate:	0.5	cfm/sf	Section 120.6(c) of California Building Code, Mandatory Requirements for Enclosed Parking Garages, provides a minimum 0.15 cfm/sf flowrate. Conservatively assumed 0.5 cfm/sf.
Fan Horsepower/1,000 sf:	0.19	hp/1,000 sf	Fan Horsepower = (CFM x Static Pressure of 1.6 in WC)/(6356 x Motor Fan Efficiency of 65%)
Setback Mode Power Ventilation Flowrate:	0.05	cfm/sf	Energy Star technical reference recommends a minimum flow rate of 0.05 cfm/sf when fan is in setback mode.
Fan Horsepower/1,000 sf:	0.02	hp/1,000 sf	Fan Horsepower = (CFM x Static Pressure of 1.6 in WC)/(6356 x Motor Fan Efficiency of 65%)
Fan Horsepower/1,000 sf per Day:	1.51	hp/1,000 sf/Day	Energy Star technical reference recommends 6 hours per day at full power and 18 hours per day at 0.05 cfm/sf in setback mode
Horsepower to kW Conv.	0.746	kW per hp	
Fan kW/1,000 sf per Day:	1.13	kW/1,000 sf/Day	
Annual kW/sf	0.41	kWh/sf Annual	

Source: Energy Star Portfolio Manger Technical Reference: Parking and the Energy Star Score in the United States and Canada, August 2018

Buildout Parking Garage Lighting

Square Footage =	56,000	ft2
Allowed Lighting Power =	0.2	watts per ft2 (Table 140.6 (Complete Building Method Lighting Power Density Value) of the 2013 Building Energy Efficiency Standards)
Annual kW =	97,867	conservatively assumes maximum lighting power 24 hours per day)
Annual kW/sq ft =	**1.75**	kWh/sq ft annual
Adjustment:	2.33	(CalEEMod applies mititgation to all land uses. So, this adjustement accounts for the 25% reduction in lighting associated with LEED Silver)
Elevator (no change CalEEMod Default)	**0.19**	kWh/sq ft annual

APPLICABLE GHG REDUCTION MEASURES Included within CalEEMod

Energy Reduction Measures Included in CalEEMod Run:
High Efficiency Lighting (25%)
Title 24 (Above 10%)

Water Reduction Measures Included in CalEEMod Run:
20 Percent Reduction Beyond Code Requirements

Waste Diversion Rate Reduction Measures Included in CalEEMod Run:
-Project assumes a 76.4% Diversion Rate (Los Angeles, 2011)

Area Source Reduction Measure Included in CalEEMod Run:
-New Residential DU's do not include fireplaces.

Bellwood

LADOT VMT Calculator Data

VMT Summary

	Existing	Proposed Project	With Mitigation	Project Weekday Trips	Weekend Trips	Weekend Vs. Weekday Ratio
Daily Trips	477	400	400	1	1	**1.00**
Daily VMT	3,153	3,171	3,171			
Pass by trips	0	0				

Project without TDM (MXD Data)

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	27	-44.4%	15	5.6	151	84
Home Based Other Production	53	-39.6%	32	4.9	260	157
Non Home Based Other Production	53	-5.7%	50	8.1	429	405
Home Based Work Attraction	240	-27.9%	173	8.6	2,064	1,488
Home Based Other Attraction	53	-41.5%	31	8.4	445	260
Non Home Based Other Attraction	107	-5.6%	101	7.9	845	798
Total	**533**				**4,194**	**3,192**

Project with TDM (MXD Data)

	Proposed Project			*Project with Mitigation Measures*		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-0.6%	15	83	-0.6%	15	83
Home Based Other Production	-0.6%	32	156	-0.6%	32	156
Non Home Based Other Production	-0.6%	50	402	-0.6%	50	402
Home Based Work Attraction	-0.6%	172	1,479	-0.6%	172	1,479
Home Based Other Attraction	-0.6%	31	258	-0.6%	31	258
Non Home Based Other Attraction	-0.6%	100	793	-0.6%	100	793
Total		**400**	**3,171**		**400**	**3,171**
Residential VMT			239			239

Source: Fehr and Peers

GHG Emissions Reductions for Residential Uses Associated with Electric Vehicle Charging Stations/Plugins

Step 1: Estimating GHG Emisisons Reduction to Replace Gasoline/Diesel Vehicle with Electric Vehicle

LADWP Electricity Emission Factor[1]	0.27	MTCO2E/MWh
Fuel Economy of Electric Vehicle[2]	0.33	kWh/mile
Electric Vehicle GHG Emissions	89.4	grams/mile
GHG Emissions from Residential Miles Traveled (CalEEMod)[3]	376.5	grams/mile
GHG Emissions Reduction from Additional Electric Vehicles, per mile	287.1	grams/mile

Step 2: Estimating Project Residential-Related VMT GHG Emissions

Residential Average Yearly VMT with TDM and PDFs[4]	1,163,060	miles/year
Percent of Residential Miles Driven in Electric Vehicles due to this Measure	10.0%	
Residential VMT that is Displaced by Evs due to this Measure	116,306	miles/year
GHG Emisisons Reduction from Residential Electric Vehicles	**33**	MTCO2E/MWh
Energy Usage for Charging Vehicles	**38,381**	kWH/year

Notes:
1) CO2 intensity factor reflects a 2023 RPS for LADWP (672 lbs of CO2E/MWh).
2) US Department of Energy, 2013. Benefits and Considerations of Electricity as a Vehicle Fuel. Available at: http://afdc.energy.gov/fuels/electricity_benefits.html.
3) CalEEMod Output file provided in Appendix XX.X of this Draft EIR.
4) Residential charging of vehicles would primarily occur over night, while commercial use charging of vehicles would primarily occur during the day. In addition, it is assumed that the charging stations/plugins for residential uses would be fully utlized which is supported by the projected number of electric vehicles in the future. Bloomberg New Energy Finance projects that electric vehicles will represent 35 percent of global new car sales by 2040 (https://about.bnef.com/blog/electric-vehicles-to-be-35-of-global-new-car-sales-by-2040/).

Bellwood - Existing Baseline Operations (2019)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
Condo/Townhouse	112.00	Dwelling Unit	2.20	43,939.00	320

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2019
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	801	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP SB100 RPS - 801 lbs CO2/MWh (2019)

Land Use - see project description

Vehicle Trips - see assumptions

Woodstoves - No Wood Stoves

Energy Use - Existing Baseline

Mobile Land Use Mitigation -

Energy Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	29,659.00	75,600.00
tblArchitecturalCoating	ConstArea_Residential_Interior	88,976.00	226,800.00
tblAreaCoating	Area_Residential_Exterior	29659	75600
tblAreaCoating	Area_Residential_Interior	88976	226800
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	220.00	230.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	3.00	10.00
tblEnergyUse	NT24E	3,125.85	3,795.01
tblEnergyUse	NT24NG	3,046.55	4,831.00
tblEnergyUse	T24E	286.69	186.63
tblEnergyUse	T24NG	15,240.45	13,424.50
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	5.60	0.00

tblLandUse	LandUseSquareFeet	112,000.00	43,939.00
tblLandUse	LotAcreage	7.00	2.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	801
tblVehicleTrips	CC_TL	8.40	6.61
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	8.70	0.00
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	0.00
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	0.00
tblVehicleTrips	HW_TTP	40.20	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	5.67	0.00
tblVehicleTrips	ST_TR	0.00	477.00
tblVehicleTrips	SU_TR	4.84	0.00
tblVehicleTrips	SU_TR	0.00	477.00
tblVehicleTrips	WD_TR	5.81	0.00
tblVehicleTrips	WD_TR	0.00	477.00
tblWoodstoves	NumberCatalytic	5.60	0.00
tblWoodstoves	NumberNoncatalytic	5.60	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																24.9299
Energy																313.1540
Mobile																535.3753
Waste																25.9095
Water																63.1918
Total																**962.5606**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																24.9299
Energy																313.1540
Mobile																535.3753
Waste																6.1665
Water																63.1918
Total																**942.8175**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.05**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																535.3753
Unmitigated																535.3753

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	0.00	0.00	0.00		
User Defined Commercial	477.00	477.00	477.00	1,147,681	1,147,681
Total	477.00	477.00	477.00	1,147,681	1,147,681

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
User Defined Commercial	0.00	6.61	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.548007	0.045751	0.200309	0.124119	0.017133	0.006025	0.018861	0.028423	0.002391	0.002469	0.004915	0.000672	0.000925
User Defined Commercial	0.548007	0.045751	0.200309	0.124119	0.017133	0.006025	0.018861	0.028423	0.002391	0.002469	0.004915	0.000672	0.000925

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																203.3972
Electricity Unmitigated																203.3972
NaturalGas Mitigated																109.7569
NaturalGas Unmitigated																109.7569

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	2.04462e+006																109.7569
User Defined Commercial	0																0.0000
Total																	**109.7569**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	2.04462e+006																109.7569
User Defined Commercial	0																0.0000
Total																	**109.7569**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	558067				203.3972
User Defined Commercial	0				0.0000
Total					**203.3972**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	558067				203.3972
User Defined Commercial	0				0.0000
Total					**203.3972**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																24.9299
Unmitigated																24.9299

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Hearth																22.9969
Landscaping																1.9330
Total																**24.9299**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Hearth																22.9969
Landscaping																1.9330
Total																**24.9299**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				63.1918
Unmitigated				63.1918

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	7.29725 / 4.60044				63.1918
User Defined Commercial	0 / 0				0.0000
Total					**63.1918**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	7.29725 / 4.60044				63.1918
User Defined Commercial	0 / 0				0.0000
Total					**63.1918**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				6.1665
Unmitigated				25.9095

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	51.52				25.9095
User Defined Commercial	0				0.0000

Total				**25.9095**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	12.2618				6.1665
User Defined Commercial	0				0.0000
Total					**6.1665**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Bellwood - Existing Operations (2023)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
Condo/Townhouse	112.00	Dwelling Unit	2.22	43,939.00	320

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2023
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	678	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP SB100 RPS - 678 lbs CO2/MWh (2023)

Land Use - see project description

Vehicle Trips - see assumptions

Woodstoves - No Wood Stoves

Mobile Land Use Mitigation -

Energy Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	29,659.00	75,600.00
tblArchitecturalCoating	ConstArea_Residential_Interior	88,976.00	226,800.00
tblAreaCoating	Area_Residential_Exterior	29659	75600
tblAreaCoating	Area_Residential_Interior	88976	226800
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	220.00	230.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	3.00	10.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	5.60	0.00
tblLandUse	LandUseSquareFeet	112,000.00	43,939.00
tblLandUse	LotAcreage	7.00	2.22
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	678
tblVehicleTrips	CC_TL	8.40	6.61
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	8.70	0.00
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	0.00
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	0.00
tblVehicleTrips	HW_TTP	40.20	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	5.67	0.00
tblVehicleTrips	ST_TR	0.00	477.00
tblVehicleTrips	SU_TR	4.84	0.00
tblVehicleTrips	SU_TR	0.00	477.00
tblVehicleTrips	WD_TR	5.81	0.00
tblVehicleTrips	WD_TR	0.00	477.00
tblWoodstoves	NumberCatalytic	5.60	0.00
tblWoodstoves	NumberNoncatalytic	5.60	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																24.9290

Energy																282.0185
Mobile																482.1688
Waste																25.9095
Water																55.0390
Total																**870.0647**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																24.9290
Energy																282.0185
Mobile																482.1688
Waste																6.1665
Water																55.0390
Total																**850.3217**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.27**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																482.1688
Unmitigated																482.1688

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	0.00	0.00	0.00		
User Defined Commercial	477.00	477.00	477.00	1,147,681	1,147,681

Total	477.00	477.00	477.00	1,147,681	1,147,681

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
User Defined Commercial	0.00	6.61	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
User Defined Commercial	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																172.2616
Electricity Unmitigated																172.2616
NaturalGas Mitigated																109.7569
NaturalGas Unmitigated																109.7569

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	2.04462e+006																109.7569
User Defined Commercial	0																0.0000
Total																	**109.7569**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	2.04462e+006																109.7569
User Defined Commercial	0																0.0000
Total																	**109.7569**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	558067				172.2616
User Defined Commercial	0				0.0000
Total					**172.2616**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	558067				172.2616
User Defined Commercial	0				0.0000
Total					**172.2616**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																24.9290
Unmitigated																24.9290

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Hearth																22.9969
Landscaping																1.9321
Total																**24.9290**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Hearth																22.9969
Landscaping																1.9321
Total																**24.9290**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				55.0390
Unmitigated				55.0390

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr		
Condo/Townhouse	7.29725 / 4.60044			55.0390
User Defined Commercial	0 / 0			0.0000
Total				**55.0390**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	7.29725 / 4.60044				55.0390
User Defined Commercial	0 / 0				0.0000
Total					**55.0390**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				6.1665
Unmitigated				25.9095

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	51.52				25.9095
User Defined Commercial	0				0.0000
Total					**25.9095**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	12.2618				6.1665
User Defined Commercial	0				0.0000
Total					**6.1665**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Bellwood - Project Construction and Operations (No MXD or PDFs)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
Enclosed Parking with Elevator	140.00	Space	0.00	56,000.00	0
Health Club	50.46	1000sqft	1.16	50,463.00	0
Congregate Care (Assisted Living)	192.00	Dwelling Unit	2.22	191,291.00	549

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2023
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	678	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP SB100 RPS - 2023 Buildout Year - 678 lbs CO2/MWh

Land Use - site specific. Includes 50,560 sf of indoor common areas.
241,754 SF of floor area

Construction Phase - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - see assumptions

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Trips and VMT - Site Specific

Demolition - Existing uses = 43,939 SF
Parking/Pavement = 16,400 SF

Grading - 2.22 acres

Woodstoves - Unmitigated Scenario - Natural gas fireplaces in all units

Energy Use - see parking garage ventilation calculations

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - City of LA 2012 Waste Diversion Rate

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	25,232.00	7,315.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	75,695.00	21,945.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	129,121.00	129,600.00
tblArchitecturalCoating	ConstArea_Residential_Interior	387,364.00	388,800.00
tblAreaCoating	Area_Nonresidential_Exterior	25232	7315
tblAreaCoating	Area_Nonresidential_Interior	75695	21945
tblAreaCoating	Area_Residential_Exterior	129121	129600
tblAreaCoating	Area_Residential_Interior	387364	388800
tblEnergyUse	LightingElect	1.75	2.33
tblEnergyUse	T24E	3.92	0.41
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	163.20	20.00
tblFireplaces	NumberWood	9.60	0.00
tblGrading	AcresOfGrading	0.00	2.22
tblGrading	MaterialExported	0.00	74,800.00
tblLandUse	LandUseSquareFeet	50,460.00	50,463.00
tblLandUse	LandUseSquareFeet	192,000.00	191,291.00
tblLandUse	LotAcreage	1.26	0.00
tblLandUse	LotAcreage	12.00	2.22
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	678

tblSolidWaste	SolidWasteGenerationRate	287.62	83.39
tblTripsAndVMT	HaulingTripLength	20.00	35.40
tblTripsAndVMT	HaulingTripLength	20.00	35.40
tblTripsAndVMT	HaulingTripNumber	274.00	820.00
tblTripsAndVMT	HaulingTripNumber	9,350.00	10,686.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	38.00	400.00
tblTripsAndVMT	VendorTripNumber	38.00	100.00
tblTripsAndVMT	VendorTripNumber	38.00	50.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	50.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	WorkerTripNumber	25.00	30.00
tblTripsAndVMT	WorkerTripNumber	23.00	30.00
tblTripsAndVMT	WorkerTripNumber	183.00	30.00
tblTripsAndVMT	WorkerTripNumber	183.00	100.00
tblTripsAndVMT	WorkerTripNumber	183.00	180.00
tblTripsAndVMT	WorkerTripNumber	18.00	40.00
tblTripsAndVMT	WorkerTripNumber	37.00	200.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	7.87
tblVehicleTrips	CC_TTP	64.10	0.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	16.90	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	HO_TL	8.70	0.00
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	0.00
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	0.00
tblVehicleTrips	HW_TTP	40.20	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PR_TP	86.00	0.00
tblVehicleTrips	PR_TP	52.00	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	2.20	0.00
tblVehicleTrips	ST_TR	20.87	0.00

tblVehicleTrips	ST_TR	0.00	533.00
tblVehicleTrips	SU_TR	2.44	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	0.00	533.00
tblVehicleTrips	WD_TR	2.74	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	0.00	533.00
tblWater	IndoorWaterUseRate	2,984,363.05	865,264.20
tblWater	OutdoorWaterUseRate	1,829,125.74	530,323.22
tblWoodstoves	NumberCatalytic	9.60	0.00
tblWoodstoves	NumberNoncatalytic	9.60	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																8.1485
Energy																602.2733
Mobile																633.6969
Stationary																1.3757
Waste																130.0453
Water																100.8267
Total																**1,476.3663**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																8.1485
Energy																588.8666
Mobile																633.6969
Stationary																1.3757
Waste																30.6907

Water																100.8267
Total																**1,363.6050**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**7.64**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																633.6969
Unmitigated																633.6969

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
User Defined Commercial	533.00	533.00	533.00	1,526,616	1,526,616
Total	533.00	533.00	533.00	1,526,616	1,526,616

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted Living)	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
User Defined Commercial	0.00	7.87	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Enclosed Parking with Elevator	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Health Club	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
User Defined Commercial	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																453.0570
Electricity Unmitigated																458.2457
NaturalGas Mitigated																135.8096
NaturalGas Unmitigated																144.0277

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	1.76965e+006																94.9966
Enclosed Parking with Elevator	0																0.0000
Health Club	913380																49.0311
User Defined Commercial	0																0.0000
Total																	**144.0277**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	1.68544e+006																90.4761
Enclosed Parking with Elevator	0																0.0000
Health Club	844498																45.3335
User Defined Commercial	0																0.0000
Total																	**135.8096**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	760335				234.6969
Enclosed Parking with Elevator	164080				50.6475
Health Club	560139				172.9013
User Defined Commercial	0				0.0000
Total					**458.2457**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	757176				233.7217
Enclosed Parking with Elevator	161784				49.9388
Health Club	548785				169.3965
User Defined Commercial	0				0.0000
Total					**453.0570**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																8.1485
Unmitigated																8.1485

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Hearth																4.8313
Landscaping																3.3172
Total																**8.1484**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Hearth																4.8313
Landscaping																3.3172
Total																**8.1484**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				100.8267
Unmitigated				100.8267

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	12.5096 / 7.88647				94.3526
Enclosed Parking with Elevator	0 / 0				0.0000

Health Club	0.865264 / 0.530323			6.4742
User Defined Commercial	0 / 0			0.0000
Total				**100.8267**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	12.5096 / 7.88647				94.3526
Enclosed Parking with Elevator	0 / 0				0.0000
Health Club	0.865264 / 0.530323				6.4742
User Defined Commercial	0 / 0				0.0000
Total					**100.8267**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				30.6907
Unmitigated				130.0453

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	175.2				88.1084
Enclosed Parking with Elevator	0				0.0000
Health Club	83.39				41.9370
User Defined Commercial	0				0.0000

Total				**130.0453**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	41.3472				20.7936
Enclosed Parking with Elevator	0				0.0000
Health Club	19.68				9.8971
User Defined Commercial	0				0.0000
Total					**30.6907**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	12	300	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)																1.3757
Total																**1.3757**

11.0 Vegetation

Bellwood - Project Construction and Operations

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.00	0.00	0
Enclosed Parking with Elevator	140.00	Space	0.00	56,000.00	0
Health Club	50.46	1000sqft	1.16	50,463.00	0
Congregate Care (Assisted Living)	192.00	Dwelling Unit	2.22	191,291.00	549

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2023
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	678	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - LADWP SB100 RPS - 2023 Buildout Year - 678 lbs CO2/MWh

Land Use - site specific. Includes 50,560 sf of indoor common areas.
241,754 SF of floor area

Construction Phase - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Off-road Equipment - see assumptions

Off-road Equipment - Site Specific

Off-road Equipment - Site Specific

Trips and VMT - Site Specific

Demolition - Existing uses = 43,939 SF
Parking/Pavement = 16,400 SF

Grading - 2.22 acres

Woodstoves - No Wood Stoves
Assumes limited fire places throughout Project site

Energy Use - see parking garage ventilation calculations

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - City of LA 2012 Waste Diversion Rate

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	25,232.00	7,315.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	75,695.00	21,945.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	129,121.00	129,600.00
tblArchitecturalCoating	ConstArea_Residential_Interior	387,364.00	388,800.00
tblAreaCoating	Area_Nonresidential_Exterior	25232	7315
tblAreaCoating	Area_Nonresidential_Interior	75695	21945
tblAreaCoating	Area_Residential_Exterior	129121	129600
tblAreaCoating	Area_Residential_Interior	387364	388800
tblConstructionPhase	NumDays	18.00	153.00
tblConstructionPhase	NumDays	230.00	2.00
tblConstructionPhase	NumDays	230.00	152.00
tblConstructionPhase	NumDays	230.00	302.00
tblConstructionPhase	NumDays	20.00	41.00
tblConstructionPhase	NumDays	8.00	66.00
tblConstructionPhase	NumDays	18.00	22.00
tblEnergyUse	LightingElect	1.75	2.33
tblEnergyUse	T24E	3.92	0.41
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	163.20	20.00
tblFireplaces	NumberWood	9.60	0.00
tblGrading	AcresOfGrading	0.00	2.22
tblGrading	MaterialExported	0.00	74,800.00
tblLandUse	LandUseSquareFeet	50,460.00	50,463.00
tblLandUse	LandUseSquareFeet	192,000.00	191,291.00
tblLandUse	LotAcreage	1.26	0.00
tblLandUse	LotAcreage	12.00	2.22
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblProjectCharacteristics	CO2IntensityFactor	1227.89	678
tblSolidWaste	SolidWasteGenerationRate	287.62	83.39
tblTripsAndVMT	HaulingTripLength	20.00	35.40
tblTripsAndVMT	HaulingTripLength	20.00	35.40
tblTripsAndVMT	HaulingTripNumber	274.00	820.00
tblTripsAndVMT	HaulingTripNumber	9,350.00	10,686.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	38.00	400.00
tblTripsAndVMT	VendorTripNumber	38.00	100.00
tblTripsAndVMT	VendorTripNumber	38.00	50.00
tblTripsAndVMT	VendorTripNumber	0.00	50.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	WorkerTripNumber	25.00	30.00
tblTripsAndVMT	WorkerTripNumber	23.00	30.00
tblTripsAndVMT	WorkerTripNumber	183.00	30.00
tblTripsAndVMT	WorkerTripNumber	183.00	100.00
tblTripsAndVMT	WorkerTripNumber	183.00	180.00
tblTripsAndVMT	WorkerTripNumber	37.00	200.00
tblTripsAndVMT	WorkerTripNumber	18.00	40.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	7.93
tblVehicleTrips	CC_TTP	64.10	0.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	16.90	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	HO_TL	8.70	0.00
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	0.00
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	0.00
tblVehicleTrips	HW_TTP	40.20	0.00

tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PR_TP	86.00	0.00
tblVehicleTrips	PR_TP	52.00	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	2.20	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	0.00	400.00
tblVehicleTrips	SU_TR	2.44	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	0.00	400.00
tblVehicleTrips	WD_TR	2.74	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	0.00	400.00
tblWater	IndoorWaterUseRate	2,984,363.05	865,264.20
tblWater	OutdoorWaterUseRate	1,829,125.74	530,323.22
tblWoodstoves	NumberCatalytic	9.60	0.00
tblWoodstoves	NumberNoncatalytic	9.60	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021																1,535.1356
2022																750.4302
2023																555.8268
Maximum																**1,535.1356**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021																1,535.1350
2022																750.4297
2023																555.8265

Maximum																**1,535.1350**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																8.1485
Energy																602.2733
Mobile																478.8995
Stationary																1.3757
Waste																130.0453
Water																100.8267
Total																**1,321.5690**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																8.1485
Energy																555.7402
Mobile																478.8995
Stationary																1.3757
Waste																30.6907
Water																80.6614
Total																**1,155.5159**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**12.56**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	2/26/2021	5	41	
2	Grading	Grading	3/1/2021	5/31/2021	5	66	
3	Mat Foundation	Building Construction	6/1/2021	6/2/2021	5	2	
4	Foundation	Building Construction	6/3/2021	12/31/2021	5	152	
5	Building Construction	Building Construction	1/1/2022	2/28/2023	5	302	
6	Architectural Coating	Architectural Coating	3/1/2023	9/30/2023	5	153	
7	Paving	Paving	10/1/2023	10/31/2023	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2.22

Acres of Paving: 0

Residential Indoor: 388,800; Residential Outdoor: 129,600; Non-Residential Indoor: 21,945; Non-Residential Outdoor: 7,315; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Air Compressors	1	8.00	78	0.48
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Other Construction Equipment	1	2.00	172	0.42
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Rubber Tired Loaders	2	8.00	203	0.36
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	2	8.00	158	0.38
Grading	Forklifts	1	8.00	89	0.20
Grading	Graders	0	8.00	187	0.41
Grading	Other Construction Equipment	1	2.00	172	0.42
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Welders	1	8.00	46	0.45
Mat Foundation	Cement and Mortar Mixers	2	8.00	9	0.56
Mat Foundation	Cranes	0	7.00	231	0.29
Mat Foundation	Forklifts	0	8.00	89	0.20
Mat Foundation	Generator Sets	0	8.00	84	0.74
Mat Foundation	Pumps	4	8.00	84	0.74
Mat Foundation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Mat Foundation	Welders	2	8.00	46	0.45
Foundation	Concrete/Industrial Saws	1	8.00	81	0.73
Foundation	Cranes	1	8.00	231	0.29
Foundation	Forklifts	2	8.00	89	0.20
Foundation	Graders	0	8.00	187	0.41
Foundation	Plate Compactors	4	8.00	8	0.43
Foundation	Pumps	2	8.00	84	0.74
Foundation	Rough Terrain Forklifts	2	8.00	100	0.40

Foundation	Rubber Tired Dozers	0	8.00	247	0.40
Foundation	Scrapers	0	8.00	367	0.48
Foundation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Foundation	Welders	2	8.00	46	0.45
Building Construction	Aerial Lifts	2	8.00	63	0.31
Building Construction	Air Compressors	2	8.00	78	0.48
Building Construction	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Aerial Lifts	4	8.00	63	0.31
Architectural Coating	Air Compressors	4	8.00	78	0.48
Architectural Coating	Forklifts	3	8.00	89	0.20
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Plate Compactors	1	8.00	8	0.43
Paving	Rollers	0	8.00	80	0.38
Paving	Skid Steer Loaders	2	8.00	65	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Trenchers	1	8.00	78	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	30.00	10.00	820.00	14.70	6.90	35.40	LD_Mix	HDT_Mix	HHDT
Grading	9	30.00	10.00	10,686.00	14.70	6.90	35.40	LD_Mix	HDT_Mix	HHDT
Mat Foundation	8	30.00	400.00	0.00	14.70	6.90	20.00	LD_Mix	HHDT	HHDT
Foundation	14	100.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	180.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	11	200.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	40.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.0000
Off-Road																96.8693

Total																**96.8693**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																52.3064
Vendor																5.0609
Worker																6.0863
Total																**63.4537**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.0000
Off-Road																96.8692
Total																**96.8692**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																52.3064
Vendor																5.0609
Worker																6.0863
Total																**63.4537**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Fugitive Dust																0.0000
Off-Road																125.2456
Total																**125.2456**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																681.6421
Vendor																8.1469
Worker																9.7975
Total																**699.5864**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.0000
Off-Road																125.2455
Total																**125.2455**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																681.6421
Vendor																8.1469
Worker																9.7975
Total																**699.5864**

3.4 Mat Foundation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																2.7335
Total																**2.7335**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																13.1184
Worker																0.2969
Total																**13.4153**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																2.7335
Total																**2.7335**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																13.1184
Worker																0.2969
Total																**13.4153**

3.5 Foundation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																270.9942
Total																**270.9942**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																187.6247
Worker																75.2130
Total																**262.8377**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																270.9938
Total																**270.9938**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																187.6247
Worker																75.2130

Total																**262.8377**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																367.9516
Total																**367.9516**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																159.0526
Worker																223.4259
Total																**382.4786**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																367.9511
Total																**367.9511**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000

Vendor																159.0526
Worker																223.4259
Total																**382.4786**

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																59.4386
Total																**59.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																24.8855
Worker																34.7696
Total																**59.6551**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																59.4385
Total																**59.4385**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																24.8855
Worker																34.7696
Total																**59.6551**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating																0.0000
Off-Road																180.9057
Total																**180.9057**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																90.6544
Worker																140.7342
Total																**231.3885**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating																0.0000
Off-Road																180.9054
Total																**180.9054**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																90.6544
Worker																140.7342
Total																**231.3885**

3.8 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																15.1776
Paving																0.0000
Total																**15.1776**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																5.2141
Worker																4.0473
Total																**9.2614**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																15.1776
Paving																0.0000
Total																**15.1776**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																5.2141
Worker																4.0473
Total																**9.2614**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																478.8995
Unmitigated																478.8995

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
User Defined Commercial	400.00	400.00	400.00	1,154,244	1,154,244
Total	400.00	400.00	400.00	1,154,244	1,154,244

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted Living)	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
User Defined Commercial	0.00	7.93	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Enclosed Parking with Elevator	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

Health Club	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
User Defined Commercial	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																419.9306
Electricity Unmitigated																458.2457
NaturalGas Mitigated																135.8096
NaturalGas Unmitigated																144.0277

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	1.76965e+006																94.9966
Enclosed Parking with Elevator	0																0.0000
Health Club	913380																49.0311
User Defined Commercial	0																0.0000
Total																	**144.0277**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	1.68544e+006																90.4761
Enclosed Parking with Elevator	0																0.0000

Health Club	844498																	45.3335
User Defined Commercial	0																	0.0000
Total																		**135.8096**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	760335				234.6969
Enclosed Parking with Elevator	164080				50.6475
Health Club	560139				172.9013
User Defined Commercial	0				0.0000
Total					**458.2457**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	721587				222.7363
Enclosed Parking with Elevator	129164				39.8698
Health Club	509676				157.3246
User Defined Commercial	0				0.0000
Total					**419.9306**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																8.1485
Unmitigated																8.1485

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Hearth																4.8313
Landscaping																3.3172
Total																**8.1484**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Hearth																4.8313
Landscaping																3.3172
Total																**8.1484**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				80.6614
Unmitigated				100.8267

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	12.5096 / 7.88647				94.3526
Enclosed Parking with Elevator	0 / 0				0.0000
Health Club	0.865264 / 0.530323				6.4742
User Defined Commercial	0 / 0				0.0000
Total					**100.8267**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	10.0077 / 6.30918				75.4821
Enclosed Parking with Elevator	0 / 0				0.0000
Health Club	0.692211 / 0.424259				5.1793
User Defined Commercial	0 / 0				0.0000
Total					**80.6614**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				30.6907
Unmitigated				130.0453

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	175.2				88.1084
Enclosed Parking with Elevator	0				0.0000
Health Club	83.39				41.9370
User Defined Commercial	0				0.0000
Total					**130.0453**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	41.3472				20.7936
Enclosed Parking with Elevator	0				0.0000
Health Club	19.68				9.8971
User Defined Commercial	0				0.0000
Total					**30.6907**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	12	300	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)																1.3757
Total																**1.3757**

11.0 Vegetation

Appendix D

Energy Resources Calculations

Bellwood Senior Residential Community

Draft EIR

Appendix D

Energy Analysis Spreadsheets

- Appendix D: Energy Analysis
    - Energy Consumption Summary
    - Construction Energy Usage
        - Construction Electricity Usage
        - Off-Road Equipment
        - On-Road Fuel Usage Rates
        - On-Road Vehicles
        - Construction Water Usage
    - Operational Energy Usage
        - On-Road Fuel Usage Rates
        - Baseline (Existing Operations)
        - Buildout without Project Design Features
        - Buildout with Project Design Features
        - Peak Electricity Demand Calculations
        - Total County Fuel Consumption

Bellwood Senior Housing Project

Summary of Energy Use During Construction

Electricty		
Water Consumption	2,047	kWh
Temporary Power (lighting, tools)	15,221	kWh
Total:	**17,268**	kWh
Gasoline		
On Road	33,541	Gallons
Off Road	0	Gallons
Total:	**33,541**	Gallons
Diesel		
On Road	88,202	Gallons
Off Road	65,142	Gallons
Total:	**153,345**	Gallons
Total Mobile	**186,886**	

Summary of Energy Use During Operations

	Baseline (Buildout)	Buildout Without Project Features	Buildout With Project Features		Percent Reduction due to Project Features	Project Without Project Features - Baseline (Buildout)	Project (Buildout - Baseline (Buildout)
Electricity							
Electricity (building)	558,067	1,484,554	1,360,427	kWh/year	-8%	926,487	802,360
Electricity (water)	125,828	184,383	184,383	kWh/year	0%	58,555	58,555
EV Chargers	0	38,381	38,381	kWh/year		38,381	38,381
Electricity Total	**683,895**	**1,707,318**	**1,583,191**	**kWh/year**	**-7%**	**1,023,423**	**899,296**
Natural Gas							
Building	**1,947,257**	**2,409,465**	**2,409,465**	cu ft/year	0%	462,208	462,208
Fireplaces	**0**	**740,571**	**77,143**	cu ft/year	-90%	740,571	77,143
Natural Gas Total	**1,947,257**	**3,150,036**	**2,486,608**	**cu ft/year**	**-21%**	**1,202,779**	**539,350**
Mobile							
Gasoline	39,879	52,680	40,107	Gallons/year	-24%	12,800	229
Diesel	7,360	9,723	7,402	Gallons/year	-24%	2,362	42
Mobile Total	**47,240**	**62,402**	**47,510**	**Gallons/year**	**-24%**	**15,163**	**271**

Construction Electricity Usage

Caterpillar 40-C4.4 Generator[a]

Peak Power Rating - Prime (kW)	36
Typical Load	70%
Average Output (kW)	25.2
Hours per Day	2
Average Daily Output (kWh)	50.4
Building Construction Phase Duration (days)	302
Total Construction (kWh)	15,221
Total Construction (MWh)	15.2

[a]https://www.albancat.com/content/uploads/2014/06/40-C4.4-Spec-Sheet.pdf

Calculation of Diesel Usage During Cosnstruciton (Offroad Equipment):

Phase Name	Off Road Equipment Type	Units	Hours	HP	Load Factor	Avg. Daily Factor	Number of Days	Diesel Fuel Usage	
Demolition	Air Compressors	1	8	78	0.48	0.6	41	368	
Demolition	Concrete/Industrial Saws	2	8	81	0.73	0.6	41	1,164	
Demolition	Excavators	0	8	158	0.38	0.6	41	0	
Demolition	Other Construction Equipment	1	2	172	0.42	0.6	41	178	
Demolition	Rubber Tired Dozers	2	8	247	0.4	0.6	41	1,944	
Demolition	Rubber Tired Loaders	2	8	203	0.36	0.6	41	1,438	
Demolition	Tractors/Loaders/Backhoes	2	8	97	0.37	0.6	41	706	
Grading	Bore/Drill Rigs	1	8	221	0.5	0.6	66	1,750	
Grading	Excavators	2	8	158	0.38	0.6	66	1,902	
Grading	Forklifts	1	8	89	0.2	0.6	66	282	
Grading	Graders	0	8	187	0.41	0.6	66	0	
Grading	Other Construction Equipment	1	2	172	0.42	0.6	66	286	
Grading	Rubber Tired Dozers	1	8	247	0.4	0.6	66	1,565	
Grading	Rubber Tired Loaders	1	8	203	0.36	0.6	66	1,158	
Grading	Tractors/Loaders/Backhoes	1	8	97	0.37	0.6	66	568	
Grading	Welders	1	8	46	0.45	0.6	66	328	
Mat Foundation	Cement and Mortar Mixers	2	8	9	0.56	0.6	2	5	
Mat Foundation	Cranes	0	7	231	0.29	0.6	2	0	
Mat Foundation	Forklifts	0	8	89	0.2	0.6	2	0	
Mat Foundation	Generator Sets	0	8	84	0.74	0.6	2	0	
Mat Foundation	Pumps	4	8	84	0.74	0.6	2	119	
Mat Foundation	Tractors/Loaders/Backhoes	0	7	97	0.37	0.6	2	0	
Mat Foundation	Welders	2	8	46	0.45	0.6	2	20	
Foundation	Concrete/Industrial Saws	1	8	81	0.73	0.6	152	2,157	
Foundation	Cranes	1	8	231	0.29	0.6	152	2,444	
Foundation	Forklifts	2	8	89	0.2	0.6	152	1,299	
Foundation	Graders	0	8	187	0.41	0.6	152	0	
Foundation	Plate Compactors	4	8	8	0.43	0.6	152	502	
Foundation	Pumps	2	8	84	0.74	0.6	152	4,535	
Foundation	Rough Terrain Forklifts	2	8	100	0.4	0.6	152	2,918	
Foundation	Rubber Tired Dozers	0	8	247	0.4	0.6	152	0	
Foundation	Scrapers	0	8	367	0.48	0.6	152	0	
Foundation	Tractors/Loaders/Backhoes	0	7	97	0.37	0.6	152	0	
Foundation	Welders	2	8	46	0.45	0.6	152	1,510	
Building Construction	Aerial Lifts	2	8	63	0.31	0.6	302	2,831	
Building Construction	Air Compressors	2	8	78	0.48	0.6	302	5,427	
Building Construction	Concrete/Industrial Saws	1	8	81	0.73	0.6	302	4,286	
Building Construction	Cranes	1	8	231	0.29	0.6	302	4,855	
Building Construction	Forklifts	3	8	89	0.2	0.6	302	3,870	
Building Construction	Generator Sets	0	8	84	0.74	0.6	302	0	
Building Construction	Tractors/Loaders/Backhoes	1	6	97	0.37	0.6	302	1,951	
Building Construction	Welders	1	8	46	0.45	0.6	302	1,500	
Architectural Coating	Aerial Lifts	4	8	63	0.31	0.6	153	2,869	
Architectural Coating	Air Compressors	4	8	78	0.48	0.6	153	5,499	
Architectural Coating	Forklifts	3	8	89	0.2	0.6	153	1,961	
Paving	Cement and Mortar Mixers	1	8	9	0.56	0.6	22	27	
Paving	Pavers	0	8	130	0.42	0.6	22	0	
Paving	Paving Equipment	1	8	132	0.36	0.6	22	251	
Paving	Plate Compactors	1	8	8	0.43	0.6	22	18	
Paving	Rollers	0	8	80	0.38	0.6	22	0	
Paving	Skid Steer Loaders	2	8	65	0.37	0.6	22	254	
Paving	Tractors/Loaders/Backhoes	1	8	97	0.37	0.6	22	189	
Paving	Trenchers	1	8	78	0.5	0.6	22	206	
							Total Diesel Usage for Construction (Offr	**65,142.5**	**gallons of diesel fuel**

gallons of diesel fuel per horsepower-hour= 0.05

Notes: Equipment assumptions are provide in the CalEEMod output files and fuel usage estimate of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

EMFAC2014 Emissions Inventory
Region Type: Air Basin
Region: South Coast
Calendar Year: 2021
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Region	Veh_Class	Fuel	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	Fuel_Gas (1000 gallons/day)	Fuel_DSL (1000 gallons/day)	Miles per Gallon
South Coast	LDA	GAS	Aggregate	6,276,234	246,181,276	29,647,186	8,196	0	30.0
South Coast	LDT1	GAS	Aggregate	695,146	26,066,042	3,200,417	1,010	0	25.8
South Coast	LDT2	GAS	Aggregate	2,144,804	81,991,236	10,052,342	3,442	0	23.8
						Construction Worker Trip (Composite LDA/LDT1/LDT2):			**27.4**
South Coast	HHDT	DSL	Aggregate	96,727	11,545,820	974,406	0	1774.2	**6.5**

Notes: Consistent with CalEEMod, a construction worker trip is assumed to be a composite of 50% LDA , 25% for LDT1, and 25% for LDT2. Used EMFAC 2011 Categories for construciton as EMFAC2011 has specific categories for vehicle class T7.

Calculation of Gasoline and Diesel Usage During Phase 1 Construction (Onroad Vehicles):

Phase Name	Daily Woker Trips	Daily Vendor Trips	Days	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Trip Length (miles)			Total Length (miles)			Avg. Daily Factor	Gallons of Fuel	
							Worker	Vendor	Haul	Worker	Vendor	Haul	(worker and vendor)	Gasoline	Diesel
Demolition	30	10	41	1230	410	820	14.7	6.9	35.4	18081	2829	29028	0.6	395.5	4,721.4
Grading	30	10	66	1980	660	10686	14.7	6.9	35.4	29106	4554	378284.4	0.6	636.7	58,549.2
Mat Foundation	30	400	2	60	800	0	14.7	6.9	20	882	5520	0	0.6	19.3	508.9
Foundation	100	100	152	15200	15200	0	14.7	6.9	20	223440	104880	0	0.6	4,887.6	9,669.9
Building Construction	180	50	302	54360	15100	0	14.7	6.9	20	799092	104190	0	0.6	17,479.7	9,606.3
Architectural Coating	200	50	153	30600	7650	0	14.7	6.9	20	449820	52785	0	0.6	9,839.6	4,866.7
Paving	40	20	22	880	440	0	14.7	6.9	20	12936	3036	0	0.6	283.0	279.9
													Total:	**33,541.4**	**88,202.4**

Worker Miles per gallon=	27.43 gasoline
Vedor/Haul miles per gallon=	6.51 diesel

Notes: Consistent with CalEEMod worker vehicles are assumed to be gasoline and 50% LDA, 25%LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy Duty Trucks (T7).

Water Usage for Control of Fugitive Dust during Construction:

Phase	Days	Average Daily Acreage Distrubed	Gallons Per Year	Electricity (kWhr)
Demolition	41	0.5	61,910	602
Grading	66	0.5	99,660	969
Mat Foundation	2	0.5	3,020	29
Foundation	152	0.1	45,904	447
Building Construction	302	0	0	0
Architectural Coating	153	0	0	0
Paving	22	0	0	0
		Total:	**210,494**	**2,047**

Water application rate=	3020	gal/acre/day
kWhr equivalent=	0.01	kWhr

Notes: 1) Gallons per year of water usage for dust control is calculated based on a minimum control efficiency of 66% (three times daily) with an application rate of 3,020 gal/acre/day (Air & Waste Management Association Air Pollution Engineering Manual (1992 Edition)) and average of 26 construction days per month.
2) CalEEMod Default: Each gallon of delivered potable water in Southern California is associated with 0.009727 kWhr of electricity).

EMFAC2014 Emissions Inventory
Region Type: Air Basin
Region: South Coast
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdYr	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	Fuel_Gas (1000 gallons/day)	Fuel_DSL (1000 gallons/day)		
South Coast	2023	Annual	HHDT	DSL	Aggregated	Aggregated	99,862	12,043,323	1,008,087	0.00	1,696.53		
South Coast	2023	Annual	HHDT	GAS	Aggregated	Aggregated	74	8,047	1,488	1.89	0.00		
South Coast	2023	Annual	LDA	DSL	Aggregated	Aggregated	60,891	2,412,432	289,414	0.00	48.32		
South Coast	2023	Annual	LDA	GAS	Aggregated	Aggregated	6,459,701	246,807,538	30,522,038	7,786.05	0.00		
South Coast	2023	Annual	LDT1	DSL	Aggregated	Aggregated	352	8,196	1,229	0.00	0.36		
South Coast	2023	Annual	LDT1	GAS	Aggregated	Aggregated	737,358	27,059,295	3,407,419	995.76	0.00		
South Coast	2023	Annual	LDT2	DSL	Aggregated	Aggregated	15,173	633,608	74,552	0.00	17.31		
South Coast	2023	Annual	LDT2	GAS	Aggregated	Aggregated	2,219,229	82,875,046	10,414,098	3,244.21	0.00		
South Coast	2023	Annual	LHDT1	DSL	Aggregated	Aggregated	121,836	4,855,937	1,532,541	0.00	221.79		
South Coast	2023	Annual	LHDT1	GAS	Aggregated	Aggregated	170,372	6,057,759	2,538,296	568.77	0.00		
South Coast	2023	Annual	LHDT2	DSL	Aggregated	Aggregated	48,526	1,881,224	610,391	0.00	95.15		
South Coast	2023	Annual	LHDT2	GAS	Aggregated	Aggregated	29,153	1,003,759	434,342	108.29	0.00		
South Coast	2023	Annual	MCY	GAS	Aggregated	Aggregated	297,600	2,024,754	595,200	55.80	0.00		
South Coast	2023	Annual	MDV	DSL	Aggregated	Aggregated	35,107	1,383,747	171,566	0.00	49.25		
South Coast	2023	Annual	MDV	GAS	Aggregated	Aggregated	1,540,539	53,902,321	7,127,894	2,607.45	0.00		
South Coast	2023	Annual	MH	DSL	Aggregated	Aggregated	12,560	119,509	1,256	0.00	11.19		
South Coast	2023	Annual	MH	GAS	Aggregated	Aggregated	33,692	321,144	3,371	61.57	0.00		
South Coast	2023	Annual	MHDT	DSL	Aggregated	Aggregated	118,681	7,894,095	1,192,353	0.00	705.12		
South Coast	2023	Annual	MHDT	GAS	Aggregated	Aggregated	24,928	1,310,043	498,760	254.98	0.00		
South Coast	2023	Annual	OBUS	DSL	Aggregated	Aggregated	4,159	323,909	40,367	0.00	37.17		
South Coast	2023	Annual	OBUS	GAS	Aggregated	Aggregated	5,826	235,991	116,575	46.21	0.00		
South Coast	2023	Annual	SBUS	DSL	Aggregated	Aggregated	6,393	202,054	73,777	0.00	26.30		
South Coast	2023	Annual	SBUS	GAS	Aggregated	Aggregated	2,712	107,297	10,847	11.68	0.00		
South Coast	2023	Annual	UBUS	DSL	Aggregated	Aggregated	13	1,417	52	0.00	0.24		
South Coast	2023	Annual	UBUS	GAS	Aggregated	Aggregated	958	89,783	3,831	17.62	0.00		
												MPG	Gallons Per Mile
							Totals	453,562,228.32		15,760.27	2,908.73	**24.3**	0.04
							Total (GAS)	421,802,777.34	0.93			**26.8**	0.04
							Total (DSL)	31,759,450.98	0.07			**10.9**	0.09

Baseline Year
Calendar Year: 2019
Season: Annual
Vehicle Classification: EMFAC2007 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdYr	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	Fuel_Gas (1000 gallons/day)	Fuel_DSL (1000 gallons/day)		
South Coast	2019	Annual	HHDT	DSL	Aggregated	Aggregated	92,086	11,035,510	918,238	0.00	1,756.36		
South Coast	2019	Annual	HHDT	GAS	Aggregated	Aggregated	101	7,659	2,026	2.00	0.00		
South Coast	2019	Annual	LDA	DSL	Aggregated	Aggregated	45,875	1,896,329	216,399	0.00	42.12		
South Coast	2019	Annual	LDA	GAS	Aggregated	Aggregated	6,081,048	244,446,391	28,695,373	8,546.80	0.00		
South Coast	2019	Annual	LDT1	DSL	Aggregated	Aggregated	482	11,462	1,689	0.00	0.52		
South Coast	2019	Annual	LDT1	GAS	Aggregated	Aggregated	651,943	24,807,246	2,983,370	1,008.68	0.00		
South Coast	2019	Annual	LDT2	DSL	Aggregated	Aggregated	9,665	445,810	48,035	0.00	13.63		
South Coast	2019	Annual	LDT2	GAS	Aggregated	Aggregated	2,073,197	80,872,282	9,694,322	3,631.58	0.00		
South Coast	2019	Annual	LHDT1	DSL	Aggregated	Aggregated	97,013	4,044,995	1,220,296	0.00	195.55		
South Coast	2019	Annual	LHDT1	GAS	Aggregated	Aggregated	175,207	6,463,196	2,610,330	629.75	0.00		
South Coast	2019	Annual	LHDT2	DSL	Aggregated	Aggregated	37,900	1,552,333	476,734	0.00	83.01		
South Coast	2019	Annual	LHDT2	GAS	Aggregated	Aggregated	28,635	1,024,337	426,614	114.60	0.00		
South Coast	2019	Annual	MCY	GAS	Aggregated	Aggregated	259,354	1,869,286	518,708	51.29	0.00		
South Coast	2019	Annual	MDV	DSL	Aggregated	Aggregated	23,710	1,023,301	117,204	0.00	40.71		
South Coast	2019	Annual	MDV	GAS	Aggregated	Aggregated	1,497,221	54,845,361	6,911,949	2,999.26	0.00		
South Coast	2019	Annual	MH	DSL	Aggregated	Aggregated	11,071	110,800	1,107	0.00	10.76		
South Coast	2019	Annual	MH	GAS	Aggregated	Aggregated	35,590	335,289	3,560	67.31	0.00		
South Coast	2019	Annual	MHDT	DSL	Aggregated	Aggregated	114,051	7,128,971	1,136,926	0.00	714.72		
South Coast	2019	Annual	MHDT	GAS	Aggregated	Aggregated	24,591	1,348,347	492,013	274.04	0.00		
South Coast	2019	Annual	OBUS	DSL	Aggregated	Aggregated	4,004	293,205	39,273	0.00	37.06		
South Coast	2019	Annual	OBUS	GAS	Aggregated	Aggregated	5,873	259,979	117,514	53.24	0.00		
South Coast	2019	Annual	SBUS	DSL	Aggregated	Aggregated	6,233	197,082	71,923	0.00	26.67		
South Coast	2019	Annual	SBUS	GAS	Aggregated	Aggregated	2,128	88,942	8,510	9.98	0.00		
South Coast	2019	Annual	UBUS	DSL	Aggregated	Aggregated	18	1,877	73	0.00	0.30		
South Coast	2019	Annual	UBUS	GAS	Aggregated	Aggregated	931	87,702	3,725	18.65	0.00		
												MPG	Gallons Per Mile
							Totals	444,197,691.29		17,407.18	2,921.42	**21.9**	0.05
							Total (GAS)	416,456,015.85	0.94			**23.9**	0.04
							Total (DSL)	27,741,675.44	0.06			**9.5**	0.11

Bellwood Senior Housing - Existing Operations Buildout Year
Los Angeles-South Coast County, Annual

Land Use Details

Land Uses	*Size*	*Metric*	*Lot Acreage*	*Floor Surface Area*	*Population*
Condo/Townhouse	112.00	Dwelling Uni	2.22	43,939.00	320

Trip Summary Information

Land Uses	*Average Daily Trip Rate*			*Annual VMT*
	Weekday	*Saturday*	*Sunday*	
User Defined Commercial	299	299	299	1,147,681
Total	**299**	**299**	**299**	**1,147,681**

Gasoline and Diesel Usage

	Buildout Year		Existing (Baseline) Year	
	Gasoline	*Diesel*	*Gasoline*	*Diesel*
Miles/Gallon	26.8	10.9	23.9	9.5
% Fleet Mix	93.0%	7.0%	93.8%	6.2%
Total (Gallons):	**39,879**	**7,360**	**44,975**	**7,548**

Energy by Land Use - Natural Gas

Land Uses	*kBTU/yr*	cu ft/year
Condo/Townhouse	2,044,620	1,947,257
Total	**2,044,620**	**1,947,257**

Energy by Land Use - Electricity

Land Uses	*kWH/yr*
Condo/Townhouse	558,067
Total	558,067

Water Detail

Land Uses	*Indoor Use (Mgal)*	*Outdoor Use (Mgal)*	*Electricity Use (kWh/yr)*
Condo/Townhouse	7.297	4.600	125,828
Total	7.30	4.60	**125,828**

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 kWhr of electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).

Bellwood Senior Housing - Buildout Operations Without Project Features
Los Angeles-South Coast County, Annual

Land Use Details

Land Uses	*Size*	*Metric*	*Lot Acreage*	*Floor Surface Area*	*Population*
Enclosed Parking with Elevator	140.00	Space	0.00	56,000.00	0
Health Club	50.46	1000sqft	1.16	50,463.00	0
Congregate Care (Assisted Living)	192.00	Dwelling Unit	2.22	191,291.00	549

Trip Summary Information

Land Uses	*Average Daily Trip Rate*			*Annual VMT*
	Weekday	*Saturday*	*Sunday*	
Congregate Care (Assisted Living)	0	0	0	0
Enclosed Parking with Elevator	0	0	0	0
Health Club	0	0	0	0
User Defined Commercial	533	533	533	1,516,060
Total	533	533	533	1,516,060

Gasoline and Diesel Usage

	Gasoline	*Diesel*
Miles/Gallon	26.8	10.9
% Fleet Mix	93.0%	7.0%
Total (Gallons):	**52,680**	**9,723**

Energy by Land Use - Natural Gas

Land Uses	*kBTU/yr*	cu ft/year
Congregate Care (Assisted Living)	1685440.0	1,605,181
Enclosed Parking with Elevator	0.0	0
Health Club	844498.0	804,284
Fireplaces	777600.0	740,571
Total	3,307,538	**3,150,036**

Note: CalEEmod provide pollutant emissions associated fireplaces, but does not include natural gas usage in output files. The provided usage rate is consistent with CalEEMod default factors (i.e., 90 percent of DUs have 60,000 btu/hr fireplaces, operate 25 days per year for three hours).

Energy by Land Use - Electricity

Land Uses	*kWH/yr*
Congregate Care (Assisted Living)	760,335
Enclosed Parking with Elevator	164,080
Health Club	560,139
Total	**1,484,554**

Water Detail (Unmitigated)

Land Uses	*Indoor Use (Mgal)*	*Outdoor Use (Mgal)*	*Electricity Use (kWh/yr)*
Congregate Care (Assisted Living)	10.008	6.309	172,565
Enclosed Parking with Elevator	0.000	0.000	0
Health Club	0.692	0.424	11,818
Total	10.70	6.73	**184,383**

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 kWhr o electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).

Bellwood Senior Housing - Buildout Operations
Los Angeles-South Coast County, Annual

Land Use Details

Land Uses	*Size*	*Metric*	*Lot Acreage*	*Floor Surface Area*	*Population*
Enclosed Parking with Elevator	140.00	Space	0.00	56,000.00	0
Health Club	50.46	1000sqft	1.16	50,463.00	0
Congregate Care (Assisted Living)	192.00	Dwelling Unit	2.22	191,291.00	549

Trip Summary Information

Land Uses	*Average Daily Trip Rate*			*Mitigated*
	Weekday	*Saturday*	*Sunday*	
Congregate Care (Assisted Living)	0	0	0	0
Enclosed Parking with Elevator	0.0	0.0	0.0	0
Health Club	0.0	0.0	0.0	0
User Defined Commercial	400	400	400	1,154,244
Total	400	400	400	1,154,244

Mitigated Gasoline and Diesel Usage

	Gasoline	*Diesel*
Miles/Gallon	26.8	10.9
% Fleet Mix	93.0%	7.0%
Total (Gallons):	**40,107**	**7,402**

Note: Fleet mix is 92.3% gasoline @ 30.6 miles/gallon and 7.7% diesel @ 12.1 miles/gallon.

Energy by Land Use - Natural Gas (Mitigated)

Land Uses	*kBTU/yr*	cu ft/year
Congregate Care (Assisted Living)	1,685,440	1,605,181
Enclosed Parking with Elevator	0	0
Health Club	844,498	804,284
Fireplaces	81,000	77,143
Total	2,610,938	**2,486,608**

Note: CalEEmod provide pollutant emissions associated fireplaces, but does not include natural gas usage in output files. The provided usage rate is consistent with CalEEMod default factors (i.e., 90 percent of DUs have 60,000 btu/hr fireplaces, operate 25 days per year for three hours). Consistent with GHG-PDF-1, the Project would include 20 fireplaces in common areas throughout the site.

Energy by Land Use - Electricity (Mitigated)

Land Uses	*kWH/yr*
Congregate Care (Assisted Living)	721,587
Enclosed Parking with Elevator	129,164
Health Club	509,676
Total	**1,360,427**

Note: Reduction in electricity usage reflects implementation of CalGreen and GHG-PDF-1 (Exceed Title 24, Part 6, CEC baseline requriements by 10 percent for energy efficiency, based on 2016 standards and 25% for lighting).

Water Detail (Unmitigated)

Land Uses	*Indoor Use (Mgal)*	*Outdoor Use (Mgal)*	*Electricity Use (kWh/yr)*
Congregate Care (Assisted Living)	10.008	6.309	172,565
Enclosed Parking with Elevator	0.000	0.000	0
Health Club	0.692	0.424	11,818
Total	10.70	6.73	**184,383**

15.600465

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 kWhr ofelectricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod). The City of Los Angeles Green Building Code (Chapter IX, Article 9, of the LAMC) requires newly constructed non-residential and high-rise residential buildings to reduce indoor water use by at least 20 percent by: (1) using water saving fixtures or flow restrictions; and/or (2) demonstrating a 20 percent reduction in baseline water

Peak Electricity Demand Calculations

Electrical Load Factor Equation

$$f_{Load} = \frac{\text{Average load}}{\text{Maximum load in given time period}}$$

Load Factor (%)[1] **52%**

Project Electricity Demand (Operational)

Annual Demand	Baseline (Existing)	Project
Building (MWh)	558	1,360
Water (MWh)	126	184
Total (MWh)	684	1,545
Average Daily Demand		
Building (kWh)	1,529	3,727
Water (kWh)	345	505
Total (kWh)	1,874	4,232
Average Load		
Building (kW)	64	155
Water (kW)	14	21
Total (kW)	78	176

Peak Load Calculation

Peak Load (kW)[2]	137	320
Systemwide Peak Load (MW)		5,854
Percent of Peak		0.005%

[1] 2017 Report: System Efficiency of California's Electric Grid. California Public Utilities Co 2017. Page 11, Figure 6. Visual estimate.

[2] Peak Load is conservatively calculated without any reductions from removal of existing uses.

EMFAC Emission inventories for County
EMFAC2014 (v1.0.7) Emissions Inventory
Region Type: County
Region: Los Angeles
Calendar Year: **2021** (Construction Start Year)
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Fuel_Gasoline (1000 gallons/day)	Fuel_DSL (1000 gallons/day)
Los Angeles	2021	HHDT	Aggregatec	Aggregatec	DSL	0.00	1774.20
Los Angeles	2021	HHDT	Aggregatec	Aggregatec	GAS	1.89	0.00
Los Angeles	2021	LDA	Aggregatec	Aggregatec	DSL	0.00	46.12
Los Angeles	2021	LDA	Aggregatec	Aggregatec	GAS	8195.76	0.00
Los Angeles	2021	LDT1	Aggregatec	Aggregatec	DSL	0.00	0.43
Los Angeles	2021	LDT1	Aggregatec	Aggregatec	GAS	1009.57	0.00
Los Angeles	2021	LDT2	Aggregatec	Aggregatec	DSL	0.00	15.84
Los Angeles	2021	LDT2	Aggregatec	Aggregatec	GAS	3441.72	0.00
Los Angeles	2021	LHDT1	Aggregatec	Aggregatec	DSL	0.00	211.28
Los Angeles	2021	LHDT1	Aggregatec	Aggregatec	GAS	598.07	0.00
Los Angeles	2021	LHDT2	Aggregatec	Aggregatec	DSL	0.00	90.14
Los Angeles	2021	LHDT2	Aggregatec	Aggregatec	GAS	111.80	0.00
Los Angeles	2021	MCY	Aggregatec	Aggregatec	GAS	53.90	0.00
Los Angeles	2021	MDV	Aggregatec	Aggregatec	DSL	0.00	46.02
Los Angeles	2021	MDV	Aggregatec	Aggregatec	GAS	2808.58	0.00
Los Angeles	2021	MH	Aggregatec	Aggregatec	DSL	0.00	11.04
Los Angeles	2021	MH	Aggregatec	Aggregatec	GAS	64.52	0.00
Los Angeles	2021	MHDT	Aggregatec	Aggregatec	DSL	0.00	727.46
Los Angeles	2021	MHDT	Aggregatec	Aggregatec	GAS	264.51	0.00
Los Angeles	2021	OBUS	Aggregatec	Aggregatec	DSL	0.00	37.68
Los Angeles	2021	OBUS	Aggregatec	Aggregatec	GAS	49.58	0.00
Los Angeles	2021	SBUS	Aggregatec	Aggregatec	DSL	0.00	26.53
Los Angeles	2021	SBUS	Aggregatec	Aggregatec	GAS	10.85	0.00
Los Angeles	2021	UBUS	Aggregatec	Aggregatec	DSL	0.00	0.25
Los Angeles	2021	UBUS	Aggregatec	Aggregatec	GAS	18.46	0.00
						6,069,653,628	1,090,251,415
					Fuel Usage for Project Construction	33,541	153,345
					Percentage of County for Construction	0.0006%	0.014%

EMFAC Emission inventories for County
EMFAC2014 (v1.0.7) Emissions Inventory
Region Type: County
Region: Los Angeles
Calendar Year: **2023** (Operational Start Year)
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Fuel_Gasoline (1000 gallons/day)	Fuel_DSL (1000 gallons/day)
Los Angeles	2023	HHDT	Aggregatec	Aggregatec	DSL	0.00	1696.53
Los Angeles	2023	HHDT	Aggregatec	Aggregatec	GAS	1.89	0.00
Los Angeles	2023	LDA	Aggregatec	Aggregatec	DSL	0.00	48.32
Los Angeles	2023	LDA	Aggregatec	Aggregatec	GAS	7786.05	0.00
Los Angeles	2023	LDT1	Aggregatec	Aggregatec	DSL	0.00	0.36
Los Angeles	2023	LDT1	Aggregatec	Aggregatec	GAS	995.76	0.00
Los Angeles	2023	LDT2	Aggregatec	Aggregatec	DSL	0.00	17.31
Los Angeles	2023	LDT2	Aggregatec	Aggregatec	GAS	3244.21	0.00
Los Angeles	2023	LHDT1	Aggregatec	Aggregatec	DSL	0.00	221.79
Los Angeles	2023	LHDT1	Aggregatec	Aggregatec	GAS	568.77	0.00
Los Angeles	2023	LHDT2	Aggregatec	Aggregatec	DSL	0.00	95.15
Los Angeles	2023	LHDT2	Aggregatec	Aggregatec	GAS	108.29	0.00
Los Angeles	2023	MCY	Aggregatec	Aggregatec	GAS	55.80	0.00
Los Angeles	2023	MDV	Aggregatec	Aggregatec	DSL	0.00	49.25
Los Angeles	2023	MDV	Aggregatec	Aggregatec	GAS	2607.45	0.00
Los Angeles	2023	MH	Aggregatec	Aggregatec	DSL	0.00	11.19
Los Angeles	2023	MH	Aggregatec	Aggregatec	GAS	61.57	0.00
Los Angeles	2023	MHDT	Aggregatec	Aggregatec	DSL	0.00	705.12
Los Angeles	2023	MHDT	Aggregatec	Aggregatec	GAS	254.98	0.00
Los Angeles	2023	OBUS	Aggregatec	Aggregatec	DSL	0.00	37.17
Los Angeles	2023	OBUS	Aggregatec	Aggregatec	GAS	46.21	0.00
Los Angeles	2023	SBUS	Aggregatec	Aggregatec	DSL	0.00	26.30
Los Angeles	2023	SBUS	Aggregatec	Aggregatec	GAS	11.68	0.00
Los Angeles	2023	UBUS	Aggregatec	Aggregatec	DSL	0.00	0.24
Los Angeles	2023	UBUS	Aggregatec	Aggregatec	GAS	17.62	0.00
						5,752,498,849	1,061,687,376
					Net Fuel Usage for Project Operation	229	42
					Percentage of County for Operation	0.0000%	0.0000%

Appendix E

Land Use Tables

Appendix E

Land Use Tables

Table 1
Applicable Goals of SCAG's RTP/SCS

2016–2040 RTP/SCS Goals	2020–2045 RTP/SCS Goals	Would the Project Conflict?
Goal 2: Maximize mobility and accessibility for all people and goods in the region. **Goal 4:** Preserve and Ensure a sustainable regional transportation system. **Goal 5:** Maximize the productivity of our transportation system. **Goal 6:** Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g. bicycling and walking). **Goal 8:** Encourage land use and growth patterns that facilitate transit and active transportation.	**Goal 2:** Improve mobility, accessibility, reliability, and travel safety for people and goods. **Goal 4:** Increase person and goods movement and travel choices within the transportation system. **Goal 5:** Reduce greenhouse gas emissions and improve air quality. **Goal 6:** Support healthy and equitable communities **Goal 8:** Leverage new transportation technologies and data-driven solutions that result in more efficient travel. **Goal 9:** Encourage development of diverse housing types in areas that are supported by multiple transportation options.	**No Conflict.** The Project would support and would not preclude the implementation of these regional goals. The Project would increase urban density on an already developed urban infill site in a SCAG-designated HQTA and in close proximity to shopping, services and transit. The Project would also be served by an established network of roads and freeways that provide local and regional access to the Project Site (see the consistency analysis for the General Plan Framework Element Objective 3.2 and Policy 3.2.3 in Table 2 below for further discussion). Furthermore, the Project would provide: (1) bicycle parking spaces meeting LAMC requirements that would serve to promote the use of bicycles and encourage walking; (2) enhanced sidewalks with new street trees and other streetscape improvements along the Project Site's Bellwood Avenue frontage; (3) electric vehicle charging stations; (4) shuttle service for the Project's senior residents; and (5) a range of senior housing unit types to assist in addressing the demand for senior housing in the City. In addition, as indicated in Section IV.B, Air Quality, of this Draft EIR, the Project would result in less-than-significant construction and operational air quality impacts associated with localized and regional air quality emissions and less-than-significant toxic air contaminants (TAC) impacts associated with on-site construction and operational activities. As discussed in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, the Project would not conflict with relevant plans, policies, and regulations adopted for the purpose of reducing the emissions of

Table 1 (Continued)
Applicable Goals of SCAG's RTP/SCS

2016–2040 RTP/SCS Goals	2020–2045 RTP/SCS Goals	Would the Project Conflict?
		GHGs and impacts related to regulatory and plan consistency would be less than significant. Furthermore, because the Project is consistent with and does not conflict with these plans, policies, and regulations, the Project's incremental increase in GHG emissions would not result in a significant impact on the environment. Therefore, Project-specific impacts with regard to climate change would be less than significant. Lastly, as indicated in Section IV.I, Transportation, the Project would reduce vehicle trips and would locate new housing and jobs in proximity to transit, reducing VMT and resulting in less-than-significant impacts on the transportation system. Based on the above, the Project would not conflict with the applicable RTP/SCS goals related to maximizing mobility and accessibility, ensuring a sustainable transportation system, maximizing the productivity of the transportation system, protecting the environment and health of residents, encouraging land use that facilitates transit and active transportation, and encouraging energy efficiency.
Goal 7: Actively encourage and create incentives for energy efficiency, where possible.		**No Conflict.** The Project would actively encourage energy efficiency, where possible. (see the consistent analysis for Objective 2.3 and Policy 2.3.3 in Table 2 for discussion). Hence, the Project would not conflict with this goal.

Source: Eyestone Environmental, 2021.

Table 2
Applicable Goals, Objectives, and Policies of the General Plan Framework Element

Objective/Policy	Would the Project Conflict?
Land Use Chapter	
Policy 3.1.2: Allow for the provision of sufficient public infrastructure and services to support the projected needs of the City's population and businesses within the patterns of use established in the community plans as guided by the Framework Citywide Long-Range Land Use Diagram.	**No Conflict.** While this policy refers to the citywide provision of public infrastructure, as discussed in Section IV.H, Public Services (i.e., Section IV.H.1, Public Services—Fire Protection; Section IV.H.2, Public Services—Police Protection) and Section IV.K, Utilities and Service Systems (i.e., Section IV.K.1, Water Supply and Infrastructure; Section IV.K.2, Utilities and Service Systems—Wastewater; and Section IV.K.3, Utilities and Service Systems-Energy Infrastructure), of this Draft EIR, and the Initial Study included in Appendix A of this Draft EIR, the Project would not require the construction of public services facilities, the construction of which would cause significant environmental impacts. In addition, with the abandonment of the existing 4-inch water line and the installation of two new 8-inch water lines, the water utility infrastructure near the Project Site would have capacity to serve the Project. The Project would also realign Bellwood Avenue with public pedestrian and vehicular access maintained in both directions with enhanced sidewalks and new street trees along portions of Bellwood Avenue. Therefore, the Project would not conflict with this policy.
Policy 3.1.3: Identify areas for the establishment of new open space opportunities to serve the needs of existing and future residents. These opportunities may include a citywide linear network of parklands and trails, neighborhood parks, and urban open spaces.	**No Conflict.** The proposed eldercare facility would include three wings, each oriented around the proposed ground-level central courtyard for Project residents. An outdoor bistro terrace would be provided adjacent to the lobby entrance. The Project would also include multiple landscaped terraces, and a pedestrian pathway around the westerly, southerly and easterly setbacks of the Project providing connectivity to the ground-level on-site courtyard and other ground-level open spaces for Project residents. In all, the Project would provide 14,630 square feet of open space for Project residents, which would exceed the LAMC required open space of 7,800 square feet. Lastly, the Project would provide enhanced sidewalks and streetscape improvements, including new street trees and widened sidewalks, along portions of its Bellwood Avenue frontage. The new entry plaza along Bellwood Avenue would be located adjacent to the new sidewalk and the realigned sidewalks along the Project Site portion of Bellwood Avenue would continue to connect with the existing sidewalks that connect to the sidewalks along Olympic Boulevard to the north. Thus, the Project would not conflict with this policy.
Objective 3.2: Provide for the spatial distribution of development that promotes an improved quality of life by facilitating a reduction of vehicle trips, vehicle miles traveled, and air pollution.	**No Conflict.** The Project would represent the intensification of urban density on an urban infill site within a Transit Priority Area (TPA), in close proximity to shopping, services, and transit. As discussed in the Transportation Study included in Appendix H of this Draft

Table 2 (Continued)
Applicable Goals, Objectives, and Policies of the General Plan Framework Element

Objective/Policy	Would the Project Conflict?
Policy 3.2.3: Provide for the development of land use patterns that emphasize pedestrian/ bicycle access and use in appropriate locations.	EIR, the study area is served by bus lines operated by Metro, Culver City Bus, Santa Monica Big Blue Bus, Antelope Valley Transit Authority, Santa Clarita Transit, and LADOT Commuter Express. The closest transit service is Santa Monica Big Blue Bus Lines 3 and 5 with bus stops located along Olympic Boulevard, near Kerwood Avenue (½-block to the southwest) and at Century Park West (one block to the northeast). The Project Site is also located approximately 0.5 mile from the future Metro Purple Line rail station at Constellation Boulevard and Avenue of the Stars. In addition, sidewalk and streetscape improvements (including any required lighting) would be provided along the Project Site's Bellwood Avenue frontage that would connect to other such existing improvements along Bellwood Avenue, and pedestrian pathways and plazas would be provided throughout the Project Site. Furthermore, as indicated in Section IV.I, Transportation, of this Draft EIR, the Project would reduce vehicle trips and would locate new housing and jobs in proximity to transit, reducing vehicle miles traveled (VMT) and resulting in less-than-significant transportation impacts.[1] While there are no existing bike lanes/paths in the Project vicinity,[2] the Project would not hinder the future development of such lanes/paths. The Project would also provide 72 bicycle parking spaces which would meet LAMC requirements, would provide vehicle parking in subterranean structures with access provided from one entry/exit driveway located along Bellwood Avenue near the northern boundary of the building so as to not interfere with bicycle and pedestrian circulation, and would comply with City requirements for providing electric vehicle charging capabilities/stations. Thus, the Project would not conflict with this objective and policy.
Objective 3.3: Accommodate projected population and employment growth within the City and each community plan area and plan for the provision of adequate supporting transportation and utility infrastructure and public services.	**No Conflict.** As detailed in the Initial Study prepared for the Project, which is included in Appendix A of this Draft EIR, the Project's population and employment growth would be well within SCAG's projections for the Subregion, which serve as the basis for the Framework Element's demographics projections and planned provisions of transportation and utility infrastructure and public services. As part of the Project, Bellwood Avenue

[1] *Gibson Transportation Consulting, Transportation Assessment for Senior Residential Community at the Bellwood Project, February 2021, revised April 2021. Refer to Appendix H of this Draft EIR.*

[2] *Gibson Transportation Consulting, Transportation Assessment for Senior Residential Community at the Bellwood Project, February 2021, revised April 2021. Refer to Appendix H of this Draft EIR.*

Table 2 (Continued)
Applicable Goals, Objectives, and Policies of the General Plan Framework Element

Objective/Policy	Would the Project Conflict?
	would be realigned, and public pedestrian and vehicular access would be maintained in both directions. In addition, the sidewalks would be enhanced and improved with new street trees along portions of Bellwood Avenue. The realigned sidewalks through the Project Site would continue to connect with the sidewalks along the existing portions of Bellwood Avenue that connect to Olympic Boulevard to the north. As discussed in Objective 3.2 above, the Project would be located in an area well-served by bus lines operated by Metro, Culver City Bus, Santa Monica Big Blue Bus, Antelope Valley Transit Authority, Santa Clarita Transit, and LADOT Commuter Express. The Project Site would also be located approximately 0.5 mile from the future Metro Purple Line rail station at Constellation Boulevard and Avenue of the Stars. In addition, as discussed in Policy 3.1.2 above, the Project would not require the construction of public services facilities that would cause significant environmental impacts. In addition, with the abandonment of the existing 4-inch water line and the installation of two new 8-inch water lines, the water utility infrastructure near the Project Site would have capacity to serve the Project. Therefore, the Project would not conflict with this objective.
Policy 3.8.4: Enhance pedestrian activity by the design and siting of structures. **Policy 3.9.7:** Provide for the development of public streetscape improvements, where appropriate. **Policy 3.10.4:** Provide for the development of public streetscape improvements, where appropriate.	**No Conflict.** The Project would enhance pedestrian activity by developing a new residential building in close proximity to shopping, services and transit. The Project would provide sidewalks and other streetscape improvements along its Bellwood Avenue frontage which would connect to other such improvements along Bellwood Avenue, and the Project's main entrance would be from the realigned portion of Bellwood Avenue. The Project would provide a pedestrian path within the Project Site's westerly, southerly, and easterly setbacks providing connectivity between the proposed on-site buildings and courtyard and other ground level open spaces. Therefore, the Project would not conflict with these policies.
Policy 3.13.6: Design multi-family residential units to minimize the impacts of traffic and noise and incorporate recreational and open space amenities to support the needs of the residents.	**No Conflict.** The Project would design the proposed eldercare facility to minimize the impacts of traffic as discussed in the consistency analysis for Objective 3.2 and Policy 3.2.3 above. The proposed eldercare facility would be designed to minimize the impacts of noise by: (1) providing a landscape buffer that includes new trees between the proposed facility and the existing residential uses to the south as indicated in Figure II-12, Conceptual Landscape Plan, in Section II, Project Description, of this Draft EIR; (2) the building entrance and access to parking would be oriented toward Bellwood Avenue and would be buffered from the residential uses to the south, east and west by the building itself; and (3) the Project would

Table 2 (Continued)
Applicable Goals, Objectives, and Policies of the General Plan Framework Element

Objective/Policy	Would the Project Conflict?
	include subterranean rather than surface parking as well as enclosed loading, service, trash, laundry, and kitchen facilities, such that operational noise associated with these uses would be minimized. The Project would design the proposed eldercare facility to incorporate recreational and open space amenities to support the needs of the residents as discussed in the consistency analysis for Policy 3.1.3 above. Based on the above, the Project would not conflict with this policy.
Objective 3.18: Provide for the stability and enhancement of multi-family residential, mixed-use, and/or commercial areas of the City and direct growth to areas where sufficient public infrastructure and services exist.	**No Conflict.** With regards to directing growth to areas where sufficient public infrastructure and services exist, see the consistency analysis for Policy 3.1.2, Objective 3.2 and Policy 3.2.3 above. As indicated therein, the Project would not conflict with this objective.
Housing Chapter	
Objective 4.1: Plan the capacity for and develop incentives to encourage production of an adequate supply of housing units of various types within each City subregion to meet the projected housing needs by income level of the future population to the year 2010.	**No Conflict.** The Project proposes an eldercare facility with a variety of housing types. Specifically, the Project would provide 71 dwelling units dedicated to Independent Living, 75 guest rooms dedicated to persons who require assistance with two or more non-medical activities of daily living (e.g., assisted living), and 46 guest rooms dedicated to persons who suffer from Alzheimer's disease or other disorders resulting in dementia and require 24-hour care. There is a growing need for eldercare facilities in Los Angeles because approximately 10 percent of the City's population is aged 65 years and older,[3] and this age group is expected to almost triple by 2035 in the greater Los Angeles area.[4] The Project would help meet this need and would result in a net increase in residential units on the Project Site. In recognition of the fact that these facilities provide much needed services and housing for the growing senior population of the City, the LAMC was amended in 2006 by the City Council (Ordinance No. 178,063) to allow eldercare housing within residential zones, including the R3 zone (the zoning of the portion of the Project Site south of Bellwood Avenue), subject to the approval of the Zoning Administrator.

[3] *According to United States Census 2010 data presented in the General Plan Housing Element.*

[4] *Chart 1.2 "Change in Age Distribution: Past and Projected, 2000–2010 & 2010–2035" from Housing Element, p. 1-5.*

Table 2 (Continued)
Applicable Goals, Objectives, and Policies of the General Plan Framework Element

Objective/Policy	Would the Project Conflict?
	Based on the above, the Project would not conflict with this objective.
Objective 4.2: Encourage the location of new multi-family housing development to occur in proximity to transit stations, along some transit corridors, and within some high activity areas with adequate transitions and buffers between higher-density developments and surrounding lower-density residential neighborhoods.	**No Conflict.** See the consistency analyses for Objectives 3.2 and Policy 3.2.3. As indicated therein, the Project would not conflict with this objective. In addition, the Project would include a stepped building design and would also provide a landscape buffer with new trees between the eldercare facility and the existing residential uses to the south and east of the Project Site. Therefore, the Project would not conflict with this objective.
Urban Form and Neighborhood Design Chapter	
Objective 5.9: Encourage proper design and effective use of the built environment to help increase personal safety at all times of the day.	**No Conflict.** The following security features would be incorporated into the Project design to help increase personal safety at all times of the day, thereby reducing the need for police protection services and associated facilities: (1) lobby areas that are visible from the streets or entryways; (2) building entrances and exits, spaces around the building, and pedestrian walkways that are open and in view of surrounding sites; (3) public spaces that are easily patrolled and accessed by safety personnel; (4) sufficient lighting of building entries and walkways to facilitate pedestrian orientation and clearly identify a secure route between parking areas and points of entry into the building; (5) sufficient lighting of parking areas, elevators, and lobbies to maximize visibility and reduce areas of concealment; (6) gated access to parking facilities; (7) panic buttons within the parking facilities and parking area elevators; (8) access controls in the form of private on-site security, a closed circuit security camera system, and keycard entry for the building and parking areas; (9) 24-hour security to monitor entrances and exits and manage and monitor the fire/life/safety systems; and (10) the display of contact information for on-site security staff prominently throughout the Project Site. Hence, the Project would not conflict with this objective and policy.
Open Space and Conservation Chapter	
Policy 6.4.7: Consider as part of the City's open space inventory of pedestrian streets, community gardens, shared school playfields, and privately-owned commercial open spaces that are accessible to the public, even though such elements fall outside the conventional definitions of "open space." This will help address the open space and outdoor recreation needs of communities that are currently deficient in these resources.	**No Conflict.** The Project does not include proposals for publicly-accessible open space, community gardens, shared school playfields, farmers markets, green space, etc. However, the Project would include a central courtyard for Project residents and multiple landscaped terraces throughout the Project Site. In all, the Project would provide 14,630 square feet of open space for Project residents, which would exceed the LAMC required open space of 7,800 square feet. Thus, the Project would not conflict with these policies.

Table 2 (Continued)
Applicable Goals, Objectives, and Policies of the General Plan Framework Element

Objective/Policy	Would the Project Conflict?
Policy 6.4.8: Maximize the use of existing public open space resources at the neighborhood scale and seek new opportunities for private development to enhance the open space resources of the neighborhoods. a. Encourage the development of public plazas, forested streets, farmers markets, residential commons, rooftop spaces, and other places that function like open space in urbanized areas of the City with deficiencies of natural open space, especially in targeted growth areas. b. Encourage the improvement of open space, both on public and private property, as opportunities arise. Such places may include the dedication of "unbuildable" areas or sites that may serve as green space, or pathways and connections that may be improved to serve as neighborhood landscape and recreation amenities.	
Economic Development Chapter	
Objective 7.9: Ensure that the available range of housing opportunities is sufficient, in terms of location, concentration, type, size, price/rent range, access to local services and access to transportation, to accommodate future population growth and to enable a reasonable portion of the City's work force to both live and work in the City. **Policy 7.9.2:** Concentrate future residential development along mixed-use corridors, transit corridors and other development nodes identified in the General Plan Framework Element, to optimize the impact of City capital expenditures on infrastructure improvements.	**No Conflict.** The Project would provide a range of housing types for seniors (e.g., independent living, assisted living, and memory care units). Specifically, the Project would provide 71 dwelling units dedicated to Independent Living, 75 guest rooms dedicated to persons who require assistance with two or more non-medical activities of daily living (e.g., assisted living), and 46 guest rooms dedicated to persons who suffer from Alzheimer's disease or other disorders resulting in dementia and require 24-hour care. As such, the Project would provide a range of housing units for an increasing senior population of the City. Specifically, there is a growing need for eldercare facilities in Los Angeles because approximately 10 percent of the City's population is aged 65 years and older, and the age distribution is expected to shift, and almost triple by 2035 in the greater Los Angeles area. The Project would help meet this need and would result in a net increase in residential units on the Project Site. In addition, the Project would develop such units on an urban infill site with access to services and transportation, would meet a vital need for senior housing in the City (including in the Century City area), and would generate local jobs. See the consistency analysis for Objectives 3.2 and 4.1 above for further discussion. Based on the above, the Project would not conflict with this objective and policy.

Table 2 (Continued)
Applicable Goals, Objectives, and Policies of the General Plan Framework Element

Objective/Policy	Would the Project Conflict?
Infrastructure and Public Services Chapter	
Policy 9.3.1: Reduce the amount of hazardous substances and the total amount of flow entering the wastewater system.	**No Conflict.** As discussed in the Initial Study prepared for the Project included as Appendix A of this Draft EIR, the Project would not substantially alter the Project Site drainage patterns in a manner that would result in substantial erosion, siltation, or flooding on- or off-site. Furthermore, pursuant to the Stormwater Pollution Prevention Plan (SWPPP) that would be implemented by the Project as required under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, the Project would implement best management practices (BMPs) and other erosion control measures to minimize the discharge of pollutants in stormwater runoff. The Project would also comply with the Standard Urban Stormwater Mitigation Plan (SUSMP) requirements during the operational life of the Project to reduce the discharge of polluted runoff from the Project Site. The Project would also be required to comply with the County's Low Impact Development (LID) Standards Manual and the City's LID Ordinance, which promote the use of natural infiltration systems, evapotranspiration, and the reuse of stormwater. Additionally, the Project does not include uses that handle or generate hazardous substances. Thus, with the implementation of the BMPs, the Project would reduce the amount of hazardous substances and the total amount of flow entering the wastewater system. As such, the Project would not conflict with this policy.
Goal 9C: Adequate water supply, storage facilities, and delivery system to serve the needs of existing and future residents and businesses. **Objective 9.10:** Ensure that water supply, storage, and delivery systems are adequate to support planned development.	**No Conflict.** The Project would result in a net increase in water demand of an estimated 25,941 gpd.[5] As indicated in Section IV.K.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR, with the abandonment of the existing 4-inch line and the installation of two new 8-inch lines, the water utility infrastructure near the Project Site would have capacity to serve the Project. As such, the Project would not conflict with this goal and objective.

Source: Eyestone Environmental, 2021.

[5] *Fuscoe Engineering, Inc., Water, Sewer and Energy Infrastructure Assessment Report – Senior Residential Community at the Bellwood, February 2020. Included as Appendix J of this Draft EIR.*

Table 3
Applicable Objectives and Policies of the Mobility Plan 2035

Policy	Would the Project Conflict?
Policy 1.1: Design, plan, and operate streets to prioritize the safety of the most vulnerable roadway user.	**No Conflict.** The Project would include the vacation and realignment of the portion of Bellwood Avenue that bifurcates the Project Site. The newly aligned private street would be developed in accordance with City requirements and would include an entry motor court for pick-up and drop-off of eldercare facility residents. The primary access driveway to the below-grade parking would be located further to the north so as to reduce conflict with drop-off activities. The Project would also provide parking in subterranean structures rather than rely, in part, on street parking on Bellwood Avenue, which would increase pedestrian safety as it decreases interface between vehicles and pedestrians. In addition, the Project would provide enhanced sidewalks and street improvements (including new street trees any required lighting) along portions of the Project Site's Bellwood Avenue frontage. Lastly, while no bike lanes/paths currently existing in the vicinity, the Project would not hinder future development of safe bike lanes/paths, and would also provide bike parking facilities, including 72 bike parking spaces per LAMC requirements. As such, the Project would not conflict with this policy.
Policy 1.6: Design detour facilities to provide safe passage for all modes of travel during times of construction.	**No Conflict.** As identified in Section IV.I, Transportation, of this Draft EIR, construction of the Project and the realignment of the portion of Bellwood Avenue within the Project Site would require temporary rerouting of vehicular and pedestrian traffic. The Project would incorporate TR-PDF-1 included in Section IV.I. Transportation, of this Draft EIR, in which a Construction Management Plan would be prepared and implemented as part of the Project to minimize potential construction impacts to the surrounding area related to construction trucks, worker trips, and any possible sidewalk and lane closures. The Construction Management Plan would include temporary traffic controls during all construction activities adjacent to public rights-of-way on public roadways to provide for safe passage for all modes of travel during construction, based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site. In addition, a work site traffic control plan identifying the location of any temporary roadway lane and/or sidewalk closures needed during construction would be submitted to LADOT for review. Thus, the Project would provide safe passage for all modes of travel during construction and would not conflict with this policy.
Policy 2.3: Recognize walking as a component of every trip, and ensure high quality pedestrian access in all site planning and public right-of-way modifications to provide	**No Conflict.** While this is a citywide policy, the Project would support its implementation. Specifically, sidewalk and streetscape improvements (including any required lighting) would be provided along the Project Site's Bellwood Avenue frontage that connects to existing

Table 3 (Continued)
Applicable Objectives and Policies of the Mobility Plan 2035

Policy	Would the Project Conflict?
a safe and comfortable walking environment.	improvements along Bellwood Avenue. The Project would also include a bistro terrace and lobby that would provide an active ground floor with pedestrian friendly improvements. In addition, a pedestrian pathway around the westerly, southerly and easterly setbacks of the Project would provide connectivity to the ground-level on-site courtyard and other ground-level open spaces. All Project pedestrian improvements, building entrances and corridors, elevators, parking areas, etc., would adhere to ADA requirements. Thus, the Project would not conflict with this policy.
Policy 3.1: Recognize all modes of travel, including pedestrian, bicycle, transit, and vehicular modes—including goods movement—as integral components of the City's transportation system. **Policy 3.3:** Promote equitable land use decisions that result in fewer vehicle trips by providing greater proximity and access to jobs, destinations, and other neighborhood services. **Policy 5.2:** Support ways to reduce vehicle miles traveled (VMT) per capita.	**No Conflict.** The Project would represent an urban infill project within close proximity to freeways, arterials, transit, shopping, and services. Furthermore, the Project would provide charging facilities for electric vehicles, shuttle service for the eldercare residents, sidewalk and street improvements along the Project Site's Bellwood Avenue frontage, and on-site pedestrian paths. While no bicycle paths/lanes currently exist in the immediate vicinity of the Project Site, the Project would not hinder the future development of any such paths/lanes, and would also provide bike parking facilities, including 72 bike parking spaces per LAMC requirements . The Project would also reduce vehicle trips and locate new housing and jobs in proximity to transit, reducing VMT and resulting in a less than significant transportation impact.[6] Lastly, the Project would promote equitable land use decisions that result in fewer vehicle trips by providing senior housing in the Century City area of the City, in proximity to destinations and neighborhood services. Thus, the Project would not conflict with this policy.
Policy 3.4: Provide all residents, workers and visitors with affordable, efficient, convenient, and attractive transit services.	**No Conflict.** While this is a citywide policy, the Project would support its implementation. As detailed in the Transportation Study included in Appendix H of this Draft EIR, the study area is served by bus lines operated by Metro, Culver City Bus, Santa Monica Big Blue Bus, Antelope Valley Transit Authority, Santa Clarita Transit, and LADOT Commuter Express. The closest transit service is Santa Monica Big Blue Bus Lines 3 and 5 with bus stops located along Olympic Boulevard, near Kerwood Avenue (½-block to the southwest) and at Century Park West (one block to the northeast). The Project Site would also be located approximately 0.5 mile from the future Metro Purple Line rail station at Constellation Boulevard and Avenue of the

[6] *Gibson Transportation Consulting, Transportation Assessment for Senior Residential Community at the Bellwood Project, February 2021, revised April 2021. Refer to Appendix H of this Draft EIR.*

Table 3 (Continued)
Applicable Objectives and Policies of the Mobility Plan 2035

Policy	Would the Project Conflict?
	Stars. Therefore, the Project would be located near convenient transit services available to residents and workers, and the Project would not conflict with this policy.
Policy 3.8: Provide bicyclists with convenient, secure, and well-maintained bicycle parking facilities.	**No Conflict.** The Project would provide 72 bicycle parking spaces as required by the LAMC. Short-term bicycle parking would be available on the ground floor along Bellwood Avenue, and long-term bicycle parking spaces would be located within gated and secured subterranean parking levels.
Policy 5.4: Continue to encourage the adoption of low and zero emission fuel sources, new mobility technologies, and supporting infrastructure.	**No Conflict.** While this policy applies to citywide goals relative to fuel sources, technologies and infrastructure, the Project would facilitate the use of alternative-fuel, low-emitting, and fuel-efficient vehicles by providing shuttle service for the Project's senior residents and charging stations for electric vehicles for Project residents, guests, and employees. The Project would also incorporate environmentally sustainable building features and construction protocols required by the Los Angeles Green Building Code and CALGreen. Therefore, the Project would not conflict with this policy.
Policy 5.5: Maximize opportunities to capture and infiltrate stormwater within the City's public rights-of-way.	**No Conflict.** While this is a Citywide policy, as discussed in the Initial Study prepared for the Project and included as Appendix A of this Draft EIR, stormwater from the Project Site currently sheet flows to curb inlets along Bellwood Avenue with minimal infiltration where it is captured by catch basins near the Bellwood Avenue/Olympic Boulevard intersection before flowing westerly into the 63-inch storm drain main in Olympic Boulevard. No structural or LID BMPs to treat or infiltrate stormwater are currently present at the Project Site. The Project would increase the landscaped areas and reduce the amount of on-site impervious surfaces from 89 to 87 percent. To meet the local MS4 Permit and City LID requirements, stormwater management and infiltration strategies/features would be implemented such as subsurface storage/infiltration, drywell(s), infiltration trenches, subsurface infiltration galleries, permeable pavement, etc. Thus, the Project would not conflict with this policy.

Source: Eyestone Environmental, 2021.

Table 4
Applicable Objectives and Policies of the General Plan Housing Element 2013–2021

Policy	Would the Project Conflict?
Policy 1.1.3: Facilitate new construction and preservation of a range of different housing types that address the particular needs of the city's households.	**No Conflict.** The Project would provide a range of eldercare housing types (e.g., independent living, assisted living, and memory care units) that would address a particular need for senior housing in the City. See the consistency analysis for Objective 4.1 in Table 1 for further discussion. Therefore, the Project would not conflict with this policy and objective.
Policy 2.1.1: Establish development standards and policing practices that reduce the likelihood of crime.	**No Conflict.** The Project would provide a range of security measures/features to reduce crime, thereby reducing the need for police protection services and associated facilities. See the consistency analysis for Objective 5.9 and Policy 6.3.3 in Table 1 for additional discussion. Thus, the Project would not conflict with this policy
Objective 2.2: Promote sustainable neighborhoods that have mixed-income housing, jobs, amenities, services and transit. **Policy 2.2.1:** Provide incentives to encourage the integration of housing with other compatible land uses.	**No Conflict.** The Project would promote sustainable neighborhoods and integrate housing and other compatible uses in that it would: (1) increase urban density on an urban infill site in proximity to shopping, services and transit which would serve to reduce VMT; (2) include a range of housing types (independent living, assisted living, and memory care units) for seniors; (3) be developed in a mixed-use neighborhood; and (4) would be compatible with adjacent development. See the consistency analysis for Objective 3.2 and Policy 3.2.3 in Table 1 for further discussion. Hence, the Project would not conflict with this objective and policy.
Objective 2.3: Promote sustainable buildings, which minimize adverse effects on the environment and minimize the use of non-renewable resources. **Policy 2.3.3:** Promote and facilitate reduction of energy consumption in new and existing housing.	**No Conflict.** The Project would promote sustainable buildings which minimize adverse effects on the environment and minimize the use of non-renewable resources by complying with Title 24 energy conservation requirements and incorporating the environmentally sustainable building features and construction protocols required by the Los Angeles Green Building Code and CALGreen. Furthermore, the Project would represent smart growth and environmental sustainability by intensifying urban density on an urban infill site in proximity to transit, providing shuttle service for the Project's senior residents, and providing charging stations for electric vehicles for Project residents, guests, and employees. Overall, as evaluated in Section IV.C, Energy, of the Draft EIR, the Project would not result in the wasteful or inefficient use of energy, and impacts would be less than significant. Thus, the Project would not conflict with this objective and policy.
Policy 2.3.2: Promote and facilitate reduction of water consumption in new and existing housing.	**No Conflict.** As discussed in Section IV.K.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR, the Project would comply with the water conservation requirements of the Los Angeles Green Building Code and CALGreen. Water conservation

Table 4 (Continued)
Applicable Objectives and Policies of the General Plan Housing Element 2013–2021

Policy	Would the Project Conflict?
	features could include, but would not necessarily be limited to, high efficiency toilets, low-flow showerheads and faucets, ENERGY STAR residential clothes washer and dishwashers, and domestic water heating systems that are located in close proximity of the point(s) of use. Thus, the Project would not conflict with this policy.
Policy 2.3.4: Promote and facilitate reduction of waste in construction and building operations.	**No Conflict.** As discussed in the Initial Study prepared for the Project, included in Appendix A of this Draft EIR, pursuant to the requirements of Senate Bill (SB) 1374, the Project would implement a construction waste management plan to recycle and/or salvage a minimum of 75 percent of non-hazardous demolition and construction debris. In addition, during operation, the Project would provide adequate storage areas in accordance with the City of Los Angeles Space Allocation Ordinance (Ordinance No. 171,687), which requires that development projects include an on-site recycling area or room of specified size. The Project would also comply with Assembly Bill (AB) 939, AB 341, AB 1826 and City recycling and waste diversion requirements, as applicable, by separating recyclables and organic waste from the Project's waste stream, providing clearly marked, source-sorted receptacles, and undertaking other measures, as required, to comply with these regulations. Therefore, the Project would not conflict with this policy.
Policy 2.4.2: Develop and implement design standards that promote quality residential development. **Policy 2.4.3:** Develop and implement sustainable design standards in public and private open space and street rights-of-way. Increase access to open space, parks and green spaces.	**No Conflict.** The Project would feature a contemporary architectural style and would be designed to create a visually unified site with a new building designed to complement the existing surrounding uses and respond to the low- to mid-scale character of the surrounding area. The proposed building would include building fenestration, a variety of surface materials, and a stepped design to create horizontal and vertical articulation, provide visual interest, and maintain the existing scale in the vicinity of the Project Site. In particular, building scale and massing would be defined by varying massing and height components that break up the facade into distinct and offset planes. Building materials would include smooth troweled stucco, composite metal wall panels with wood finish, limestone panels and glass. The Project would be consistent with relevant design guidelines in the General Plan Framework's Urban Form and Neighborhood Design Chapter, the Community Plan's Urban Design Chapter, and the Citywide Design Guidelines. The Project would also include: (1) multiple landscaped terraces, and a pedestrian pathway around the westerly, southerly and easterly setbacks of the Project providing connectivity to the ground-level on-site courtyard and other ground-level open spaces for Project residents; (2) a total of 14,630 square feet of open space for Project residents, which

Table 4 (Continued)
Applicable Objectives and Policies of the General Plan Housing Element 2013–2021

Policy	Would the Project Conflict?
	would exceed that required by the LAMC for the Project of 7,800 square feet; and (3) sidewalk and streetscape improvements along the Project Site's Bellwood Avenue frontage. Therefore, the Project would not conflict with these policies.

Source: Eyestone Environmental, 2021.

Table 5
Applicable Goals, Objectives, and Policies of the West Los Angeles Community Plan

Objective/Policy	Analysis of Project Consistency
Objective 1-1: To provide for the preservation of existing housing and for the development of new housing to meet the diverse economic and physical needs of the existing residents and projected population of the Plan area to the year 2010. **Objective 1-4:** To promote adequate and affordable housing and increase its accessibility to more segments of the population, especially students and senior citizens. **Policy 1-1.3:** Provide for adequate multi-family residential development. **Policy 1-4.1:** Promote greater individual choice in type, quality, price and location of housing.	**Partially Consistent.** As discussed in Section IV.G, Population and Housing, of this Draft EIR, the Project Site is currently developed with three multi-family residential developments with a total of 112 units comprised of 95 studio units, 15 one-bedroom units, and two two-bedroom units that would be removed as part of the Project. Based on the generation rates provided by the City of Los Angeles VMT Calculator Documentation, the existing multi-family residential buildings could house approximately 252 people.[7] It is noted that this estimate is conservative, and the actual number of existing persons on the Project Site would be less than that estimated by the use of the City's multi-family land use rate, as the existing units are studio and one-bedroom units that are small in size (approximately 275 to 375 square feet) and primarily occupied by single persons. The Project would construct 192 senior housing residential units, including 71 senior-independent living dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms. The Project would result in a net increase of 80 residential units compared to existing conditions. The Project would provide a range of housing units for an increasingly senior population of the City. Specifically, there is a growing need for eldercare facilities in Los Angeles because approximately 10 percent of the City's population is aged 65 years and older,[8] and the age distribution is expected to shift, and almost triple by 2035 in the greater Los Angeles area.[9] The Project would help meet this need. In addition, the Project would comply with the applicable provisions of the RSO and the Ellis Act regarding relocation. Therefore, while the Project would displace existing housing and residents, such displacement would not be considered substantial requiring the construction of replacement housing elsewhere. Additionally, it is anticipated that senior residents will vacate their current residential housing to move to the Project Site upon completion of the Project, thereby providing for the availability of other housing elsewhere. Thus, the Project would not conflict

[7] *Based on the City of Los Angeles VMT Calculator Documentation Guide, Table 1, May 2020, the generation rate 2.25 persons per unit for "Multi-Family Residential" land use is applied to the 112 existing residential units.*

[8] *According to United States Census 2010 data presented in the General Plan Housing Element.*

[9] *Chart 1.2 "Change in Age Distribution: Past and Projected, 2000–2010 & 2010–2035" from Housing Element.*

Table 5 (Continued)
Applicable Goals, Objectives, and Policies of the West Los Angeles Community Plan

Objective/Policy	Analysis of Project Consistency
	with these objectives and policies.
Policy 1-1.2: Promote neighborhood preservation in all residential neighborhoods. **Objective 1-3:** To preserve and enhance the varied and distinct residential character and integrity of existing residential neighborhoods.	**No Conflict.** The Project would promote neighborhood preservation and preserve and enhance the varied and distinct residential character and integrity of the Project area. See the consistency analysis for Objective 1-1, above, and Objective 4.2 in Table 2 for further discussion. The Project would not conflict with this policy and objective.
Objective 1-2: To reduce vehicular trips and congestion by developing new housing in proximity to adequate services and facilities. **Policy 1-2.1:** Locate higher residential densities near commercial centers and major bus routes where public service facilities and infrastructure will support this development.	**No Conflict.** The Project would increase urban density on an urban infill site within proximity to major commercial centers (e.g., Century City Regional Center[10] and Century City commercial district), shopping, services and transit. The Project would also reduce vehicle trips.[11] See the consistency analysis for Objective 3.2 and Policy 3.2.3 in Table 1 for further discussion. Thus, the Project would not conflict with this objective and policy.
Policy 1-3.1: Require architectural compatibility and adequate landscaping for new multi-family residential development to protect the character and scale of existing residential neighborhoods.	**No Conflict.** The Project would provide architectural compatibility and adequate landscaping that is protective of the character and scale of existing residential neighborhoods. See the consistency analysis for Policy 3.7.4 in Table 1 for discussion. The Project would not conflict with this policy.
Policy 1.4-1: Promote greater individual choice in type, quality, price and location of housing.	**No Conflict.** The Project proposes an eldercare facility with a variety of housing types to help meet the needs of an increasingly senior population of the City. Specifically, the Project would provide 71 dwelling units dedicated to Independent Living, 75 guest rooms dedicated to persons who require assistance with two or more non-medical activities of daily living (e.g., assisted living), and 46 guest rooms dedicated to persons who suffer from Alzheimer's disease or other disorders resulting in dementia and require 24-hour care. The Project would increase urban density on an urban infill site within proximity to major commercial centers (e.g., Century City Regional Center[12] and Century City commercial district), shopping, services and transit. Thus, the Project would not conflict with this policy.

[10] *City of Los Angeles, City of Los Angeles General Plan Framework, Land Use Element, Figure 3-3, Long Range Land Use Diagram for West/Coastal Los Angeles, February 19, 2003.*

[11] *Gibson Transportation Consulting, Transportation Assessment for Senior Residential Community at the Bellwood Project, February 2021, revised April 2021. Refer to Appendix H of this Draft EIR.*

[12] *City of Los Angeles, City of Los Angeles General Plan Framework, Land Use Element, Figure 3-3, Long Range Land Use Diagram for West/Coastal Los Angeles, February 19, 2003.*

Table 5 (Continued)
Applicable Goals, Objectives, and Policies of the West Los Angeles Community Plan

Objective/Policy	Analysis of Project Consistency
Policy 1.4-2: Ensure that new housing opportunities minimized displacement of residents.	**Partially Consistent.** The Project would remove the existing 112 units of multi-family housing on the Project Site and thus displace the associated residents of those units. However, the Project would replace this housing with 192 eldercare housing units and would result in a net increase of 80 residential units. In addition, the Project would comply with the applicable provisions of the RSO and the Ellis Act regarding relocation assistance Furthermore, as noted in the City's Housing Element, there is a growing need in the City for senior housing. Specifically, approximately 10 percent of the City's population is aged 65 years and older,[13] and this age distribution is expected to almost triple by 2035 in the greater Los Angeles area.[14] Additionally, it is anticipated that senior residents will vacate their current residential housing to move to the Project Site upon completion of the Project, thereby providing for the availability of other housing elsewhere. Thus, the Project would not conflict with this policy.
Policy 1.4-3: Encourage multiple residential development in specified commercial zones.	**No Conflict.** The Project would include the development of 192 units of eldercare housing on the Project Site, including on the portion of the Project Site zoned C2. Hence, the Project would include a multiple residential senior residential development in a commercial zone (a permitted use in the C2 zone), and thus would not conflict with this policy.
Policy 2-2.1: Encourage Pedestrian-oriented design in designated areas and in new development. **Objective 12-2:** To promote pedestrian-oriented mobility for commuter, school, recreational use, economic activity and access to transit facilities. **Policy 12-2.3:** Protect and improve pedestrian-oriented street segments.	**No Conflict.** The Project would promote pedestrian-oriented mobility and access to transit and improve pedestrian-oriented street segments. See the consistency analysis for Policy 3.2.3 in Table 2 for further discussion. Thus, the Project would not conflict with this objective and policy.
Policy 2-3.1: Establish street identity and character through appropriate sign control, landscaping and streetscape improvements; and require that new development be compatible with the scale of adjacent	**No Conflict.** The Project would consist of a three- to six-story building configured around a central courtyard. Extensive landscaped grounds would include landscaped side and rear yard setbacks around the perimeter of the Project Site as well as landscaped common area courtyards and roof deck terraces that serve to create a

[13] *According to United States Census 2010 data presented in the General Plan Housing Element.*

[14] *Chart 1.2 "Change in Age Distribution: Past and Projected, 2000–2010 & 2010–2035" from Housing Element.*

Table 5 (Continued)
Applicable Goals, Objectives, and Policies of the West Los Angeles Community Plan

Objective/Policy	Analysis of Project Consistency
neighborhoods.	buffer between the eldercare facility and the surrounding residential uses to the west, south and east of the Project Site. The northerly portion of the Project Site would be improved with the realigned portion of Bellwood Avenue that offers public vehicle and pedestrian access through the Project Site, including pedestrian sidewalks connecting the Project to the commercial uses along Olympic Boulevard to the north. In terms of size and height, careful attention has been paid to the Project design to ensure the scale and massing of the building would be compatible with the surrounding uses. The building is designed such that the six-story portion would be located centrally in the building, nearest the commercial uses and four-story hotels to the north. The building would step down in height as it nears the southerly and westerly property lines nearest the residential uses. Roof deck terraces would be provided at the fourth-floor level facing the southerly property line so that fourth floor level units are setback from adjacent residential uses to the south. The fifth-floor level would be further stepped down on the westerly wing of the building where a roof terrace would face the westerly property line. The easterly wing would include a landscaped rooftop terrace at the sixth-floor level nearest the residential use to the east. Based on the above, the Project would not conflict with this policy.
Policy 8-1.1: Consult with the Police Department in the review of development projects and land use changes to determine law enforcement needs and requirements.	**No Conflict.** As discussed in Section IV.H-2, Public Services—Police Protection, of this Draft EIR, the Project Applicant would consult with the Los Angeles Police Department (LAPD) Crime Prevention Unit regarding crime prevention features appropriate for the design of the Project. The LAPD was also consulted as part of the preparation of this Draft EIR, and responses regarding the Project provided by the LAPD in their letter were incorporated.[15] Additionally, this Draft EIR will be made available to the LAPD for its review and comment. Finally, the Project would incorporate security measures (see consistency analysis for Objective 5.9 and Policy 6.3.3 in Table 1 above). Thus, the Project would not conflict with this policy.

[15] *Correspondence with LAPD's Community Outreach and Development Division, dated July 29, 2019. Included as Appendix G of this Draft EIR.*

Table 5 (Continued)
Applicable Goals, Objectives, and Policies of the West Los Angeles Community Plan

Objective/Policy	Analysis of Project Consistency
Policy 8-2.2: Ensure adequate lighting around residential, commercial and industrial buildings to improve security.	**No Conflict.** The Project would provide sufficient lighting of building entries, walkways, parking areas, elevators, and lobbies to: (1) facilitate pedestrian orientation and clearly identify a secure route between parking areas and points of entry into the building; and (2) maximize visibility and reduce areas of concealment. Furthermore, the LAPD's Crime Prevention Unit would review the Project for required crime prevention features, including lighting. These measures would reduce the need for police protection services and associated facilities. Thus, the Project would not conflict with this policy.
Policy 8-2.3: Ensure that landscaping around buildings does not impede visibility.	**No Conflict.** The Project's perimeter landscaping would not impede visibility or provide hidden places. See the consistency analysis for Policy 8-1.1 above for further discussion. Hence, the Project would not conflict with this policy.
Objective 9-1: Ensure that fire facilities and protective services are sufficient for the existing and future population and land use. **Policy 9-1.1:** Coordinate with the Fire Department the review of significant development projects and General Plan amendments affecting land use to determine the impact on service demands.	**No Conflict.** As discussed in Section IV.H-1, Public Services—Fire Protection, of this Draft EIR, Project impacts on fire protection and emergency medical services provided by the Los Angeles Fire Department (LAFD) would be less than significant. Furthermore, the LAFD would be consulted during final building design to ensure Fire Code compliance prior to the issuance of a building permit. Standard LAFD regulations, including access, fire flow, and fire prevention measures would be applied to the Project. The LAFD was also consulted as part of the preparation of this Draft EIR.[16] Additionally, this Draft EIR will be made available to the LAFD for its review and comment. Therefore, the Project would not conflict with this objective and policy.
Policy 12-1.4: Encourage the provision of changing rooms, showers and bicycle storage at new and existing non-residential developments and public places.	**No Conflict.** The Project is a residential development, and would provide 72 bicycle parking spaces which would meet LAMC requirements. Hence, the Project would not conflict with this policy.
Objective 16-1: To the extent feasible and consistent with the Mobility Plan 2035's and the Community Plans' policies promoting multi-modal transportation and safety comply with Citywide performance standards for acceptable Levels of Service (LOS) and ensure that necessary road access and street improvements	**No Conflict.** The Project would be subject to the operational considerations in the Non-CEQA portion of the current LADOT TAG, which is enforced as a regulatory requirement through LADOT review in the building permit process. The Project would be consistent with the Mobility Plan 2035's and the Community Plan's policies promoting multi-modal transportation and safety

[16] *Correspondence with LAFD Bureau of Fire Prevention and Public Safety, dated July 12, 2019. Included as Appendix G of this Draft EIR.*

Table 5 (Continued)
Applicable Goals, Objectives, and Policies of the West Los Angeles Community Plan

Objective/Policy	Analysis of Project Consistency
are provided to accommodate traffic generated by new development.	as it would represent an urban infill project within close proximity to freeways, arterials, transit, shopping, and services. Furthermore, the Project would provide charging facilities for electric vehicles, shuttle service for the eldercare residents, sidewalk and street improvements along the Project Site's Bellwood Avenue frontage, and on-site pedestrian paths. While no bicycle paths/lanes currently exist in the immediate vicinity of the Project Site, the Project would not hinder the future development of any such paths/lanes, and would also provide bike parking facilities, including 72 bike parking spaces per LAMC requirements. Lastly, all Project access and street improvements would be developed in accordance with City design requirements. Therefore, the Project would not conflict with this objective.
Objective 16-2: To ensure that the location, intensity and timing of development is consistent with the provision of adequate transportation infrastructure.	**No Conflict.** The Project would be developed on an urban infill site within close proximity to existing freeways, major arterials, transit facilities, and other transportation infrastructure. Furthermore, the Project Site is already developed with residential uses, is already accessed by existing streets, and is already served by parking facilities. The Project would replace the existing multi-family development at the Project Site with senior housing at a greater density and would realign the portion of Bellwood Avenue that bifurcates the Project Site as a private street. Realignment of the portion of Bellwood Avenue would not adversely affect access/circulation to abutting and nearby uses as through public access would be maintained from both sides of Bellwood Avenue through the Project Site, and the existing intersections of Bellwood Avenue and Olympic Boulevard would not be affected by the proposed realignment of Bellwood Avenue as part of the Project. Rather, improved pedestrian access would be provided through enhanced sidewalks with new street trees. Lastly, the Project would be consistent with the provision of adequate transportation infrastructure (see the consistency analysis for Objective 16-1 above for discussion). Thus, the Project would be consistent with this objective.

Source: Eyestone Environmental, 2021.

Appendix F

Noise Calculation Worksheets

Senior Residential Community at the Bellwood Project

Noise Calculations Worksheets

Provided by Acoustical Engineering Services

Ambient Noise Measurements

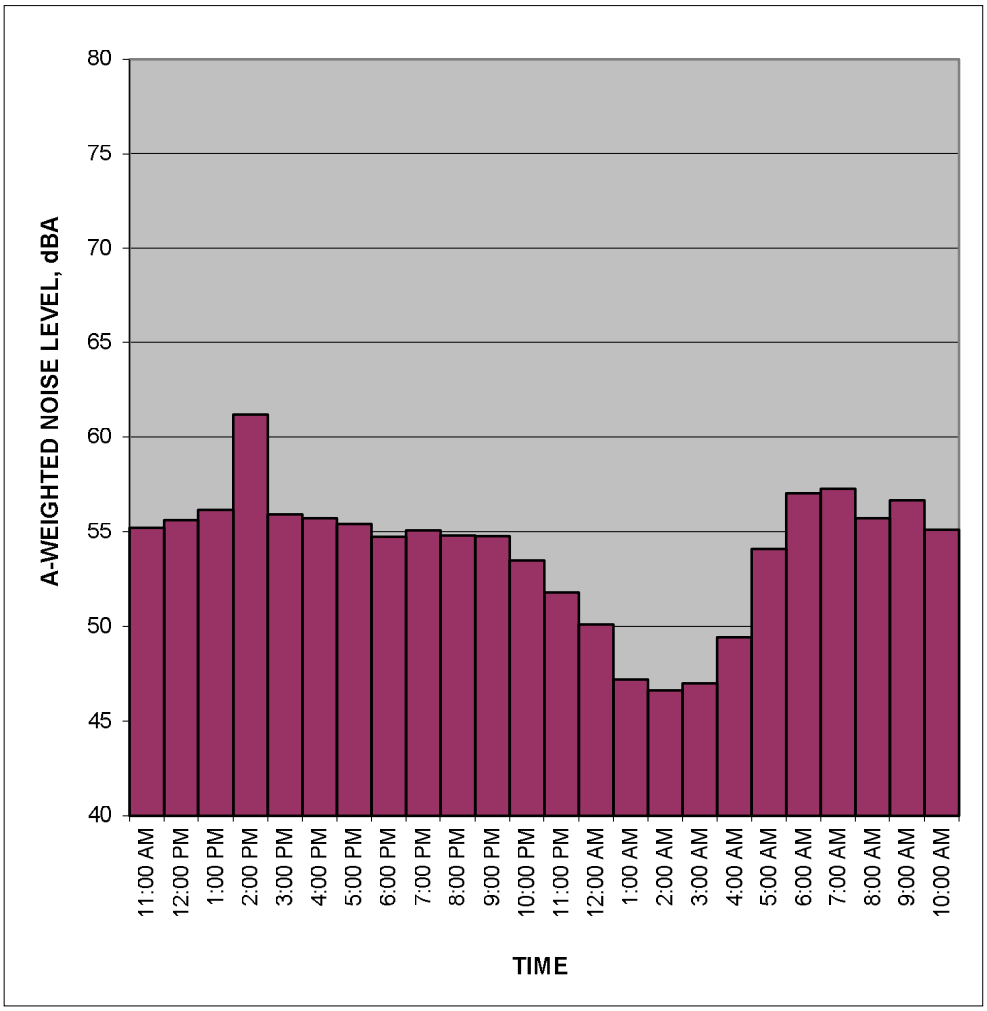
Measured Ambient Noise Levels

AES
Acoustical Engineering Services

Project: Bellwood
Location: R1
Sources: Ambient

Date: 8/20/2019

TIME	HNL, dB(A)
11:00 AM	55.2
12:00 PM	55.6
1:00 PM	56.1
2:00 PM	61.2
3:00 PM	55.9
4:00 PM	55.7
5:00 PM	55.4
6:00 PM	54.8
7:00 PM	55.1
8:00 PM	54.8
9:00 PM	54.8
10:00 PM	53.5
11:00 PM	51.8
12:00 AM	50.1
1:00 AM	47.2
2:00 AM	46.6
3:00 AM	47.0
4:00 AM	49.4
5:00 AM	54.1
6:00 AM	57.0
7:00 AM	57.3
8:00 AM	55.7
9:00 AM	56.7
10:00 AM	55.1
CNEL, dB(A):	**59.8**



NOTES:
Daytime Average Noise Levels: 56.3 dBA
Nighttime Average Noise Levels: 52.1 dBA

Location: R2
Date: 8/20/2019

AES
ACOUSTICAL ENGINEERING SERVICES

Time	Overload	Leq	Lmax	L10	L90
11:22:28 AM	No	59.9	64.1	62.5	54.4
11:23:28 AM	No	55.3	61.8	58.3	51.3
11:24:28 AM	No	58.6	61.9	61.3	53.2
11:25:28 AM	No	57.1	64.3	60	51.2
11:26:28 AM	No	57.8	63.3	60.3	53
11:27:28 AM	No	60.1	68.3	62.8	53.2
11:28:28 AM	No	59.5	65.2	62.7	55
11:29:28 AM	No	58.3	61	59.7	55.6
11:30:28 AM	No	55.4	60.3	58.2	50.4
11:31:28 AM	No	59.3	64.3	62	50.9
11:32:28 AM	No	57.6	62.1	60.8	54
11:33:28 AM	No	58.1	61.3	60.1	53.8
11:34:28 AM	No	57.5	61	59.7	54.6
11:35:28 AM	No	57.5	60.6	59.5	53.8
11:36:28 AM	No	58.5	63.3	61	53.6
		58.2			

Time	Overload	Leq	Lmax	L10	L90
9:58:41 PM	No	56.9	61.2	58.7	53.9
9:59:41 PM	No	55.3	66.9	58.8	47.2
10:00:41 PM	No	54.6	58.2	57	50.1
10:01:41 PM	No	52.7	63	54.9	46.5
10:02:41 PM	No	55.6	65.2	58.1	50.8
10:03:41 PM	No	53	56.7	55.8	48.1
10:04:41 PM	No	57.9	66.2	60.7	51.9
10:05:41 PM	No	57	67.6	58.7	52.1
10:06:41 PM	No	54.3	58.9	57.2	45.1
10:07:41 PM	No	55.7	61.2	58	52
10:08:41 PM	No	54.4	60.3	57.7	49.6
10:09:41 PM	No	56.4	60	58.5	53.6
10:10:41 PM	No	53.5	57.7	54.9	49.9
10:11:41 PM	No	53.7	56.4	55.7	48.4
10:12:41 PM	No	53.2	56.6	55.7	47.7
		55.2			

Location: R3
Date: 8/20/2019

AES
ACOUSTICAL ENGINEERING SERVICES

Time	Overload	Leq	Lmax	L10	L90
12:05:58 PM	No	58	61	59.6	56.1
12:06:58 PM	No	52.8	59	55.5	49.7
12:07:58 PM	No	57.4	61.2	59.5	53
12:08:58 PM	No	55.3	59	56.5	53.3
12:09:58 PM	No	56.4	61.2	59.1	51.4
12:10:58 PM	No	55.2	60.4	57	52.7
12:11:58 PM	No	56.6	60.9	59.3	53.7
12:12:58 PM	No	58.1	66	61.3	53.5
12:13:58 PM	No	57.4	62.9	59.5	51.4
12:14:58 PM	No	56	60.7	57.9	52.8
12:15:58 PM	No	57.9	65.5	60.3	55.3
12:16:58 PM	No	55.7	61.4	58.8	51.8
12:17:58 PM	No	57.1	66.6	60.8	50.1
12:18:58 PM	No	58.4	65	61.4	53.6
12:19:58 PM	No	53.2	59.9	56.5	48.9
		56.7			

Time	Overload	Leq	Lmax	L10	L90
10:37:29 PM	No	57.1	62.1	60	53.3
10:38:29 PM	No	55.2	61.3	59.4	46
10:39:29 PM	No	55.5	60.1	58.6	50.5
10:40:29 PM	No	54.3	59.1	57.5	49.9
10:41:29 PM	No	56.8	61.6	60.3	47.5
10:42:29 PM	No	53.7	60.3	58.3	45.3
10:43:29 PM	No	51.8	62.1	55.3	46.1
10:44:29 PM	No	56.5	61.9	59.2	50.4
10:45:29 PM	No	53.5	60.7	57.5	45.8
10:46:29 PM	No	54	61.5	57.1	49.3
10:47:29 PM	No	55	59.4	58.2	49.3
10:48:29 PM	No	57.1	64.7	61	52.1
10:49:29 PM	No	52.6	59.1	55.8	47.5
10:50:29 PM	No	55.6	59.6	58	51.6
10:51:29 PM	No	54.5	59	58.1	47.5
		55.2			

Location: R4
Date: 8/20/2019

AES
ACOUSTICAL ENGINEERING SERVICES

Time	Overload	Leq	Lmax	L10	L90
12:25:26 PM	No	65.1	69.6	67.8	60.4
12:26:26 PM	No	68.0	73	70.5	62.4
12:27:26 PM	No	63.7	68.8	66.6	56.3
12:28:26 PM	No	67.1	71.8	68.9	63.3
12:29:26 PM	No	63.8	68.5	66.9	53.5
12:30:26 PM	No	68.9	72.4	71.2	63.7
12:31:26 PM	No	64.4	68.9	67.2	59
12:32:26 PM	No	67.6	72.2	68.9	65.4
12:33:26 PM	No	66.7	72.7	70.5	59.6
12:34:26 PM	No	70.4	82.6	70.5	65.6
12:35:26 PM	No	66.2	72	69.7	57.4
12:36:26 PM	No	69.9	74	72	65.4
12:37:26 PM	No	64.9	72.7	70.1	55.3
12:38:26 PM	No	69.0	72.2	71.5	64.3
12:39:26 PM	No	66.3	70	68.5	61.3
		67.3			

Time	Overload	Leq	Lmax	Lpeak	L10
10:56:33 PM	No	61.8	68.9	66.8	49.6
10:57:33 PM	No	64.2	70.7	68.7	51.8
10:58:33 PM	No	58.8	70	64.1	42.6
10:59:33 PM	No	62.4	70.7	67	43.7
11:00:33 PM	No	66.8	73.1	70.6	57.7
11:01:33 PM	No	65.5	73.6	70	53.5
11:02:33 PM	No	62.2	70	66	50.9
11:03:33 PM	No	62.0	72	66.8	43
11:04:33 PM	No	66.1	73.4	70.3	52.8
11:05:33 PM	No	65.1	72.5	69.8	50.8
11:06:33 PM	No	64.0	71.9	68.1	49.2
11:07:33 PM	No	68.0	73.9	70.9	60.5
11:08:33 PM	No	62.7	70.3	67	52.5
11:09:33 PM	No	60.0	69.8	64.7	43
11:10:33 PM	No	62.5	69.7	67.1	51
		64.2			

Location: R5
Date: 8/20/2019

AES
Acoustical Engineering Services

Time	Overload	Leq	Lmax	L10	L90
12:46:33 PM	No	57.1	63.5	60.9	51.3
12:47:33 PM	No	58.8	67.7	61.9	50.6
12:48:33 PM	No	59.7	67.8	64.1	52.1
12:49:33 PM	No	57.6	63.3	60	53.8
12:50:33 PM	No	56.9	65.5	58.9	50.4
12:51:33 PM	No	59.2	65.8	61.5	53.8
12:52:33 PM	No	61.1	70	65.4	53.8
12:53:33 PM	No	57.4	62.3	58.8	55.3
12:54:33 PM	No	56.7	64.1	60.7	48.5
12:55:33 PM	No	57.5	62.9	60.7	51.9
12:56:33 PM	No	57.6	69.4	59.8	46.9
12:57:33 PM	No	58.1	67.8	59.4	49.3
12:58:33 PM	No	58.3	70.7	59	49.1
12:59:33 PM	No	59.9	67.8	64	50.5
1:00:33 PM	No	61.4	70.1	67.1	46.9
		58.8			

Time	Overload	Leq	Lmax	L10	L90
11:15:14 PM	No	55	66.1	58.4	42.5
11:16:14 PM	No	53	60.2	56.5	44.7
11:17:14 PM	No	52.6	59.9	56.2	45
11:18:14 PM	No	51.7	58.9	55.7	42.9
11:19:14 PM	No	50.4	58.8	55.2	41.6
11:20:14 PM	No	51.3	58	56	43.7
11:21:14 PM	No	55	60.6	58.1	46
11:22:14 PM	No	54.4	64	57.9	47.1
11:23:14 PM	No	53.6	58.6	56.9	46.9
11:24:14 PM	No	51	56.7	54.4	44.9
11:25:14 PM	No	56.1	60.2	58.7	48.1
11:26:14 PM	No	52.3	58	56.3	42.8
11:27:14 PM	No	51.6	57.7	54.6	43.5
11:28:14 PM	No	50.7	57.7	54.4	41.7
11:29:14 PM	No	53.1	60.2	57.7	41.6
		53.1			

Location: R6
Date: 8/20/2019

AES
ACOUSTICAL ENGINEERING SERVICES

Time	Overload	Leq	Lmax	L10	L90
11:42:06 AM	No	49.5	51.9	51.1	47.2
11:43:06 AM	No	51.1	54.7	52.8	48.1
11:44:06 AM	No	50	55.6	52.3	46.3
11:45:06 AM	No	51.7	55.1	53.5	48.4
11:46:06 AM	No	49.6	51.7	50.5	48.8
11:47:06 AM	No	50.6	53.6	51.6	48.9
11:48:06 AM	No	49.3	53.1	52	46.7
11:49:06 AM	No	50.4	53.2	51.9	48.1
11:50:06 AM	No	49.9	52.5	51.6	47.6
11:51:06 AM	No	50.3	53.1	52.2	48
11:52:06 AM	No	51.7	57.1	53.7	46.5
11:53:06 AM	No	50.4	55.5	52.6	47.2
11:54:06 AM	No	52.2	55.8	54.9	46.5
11:55:06 AM	No	50.7	56.1	53.5	47.6
11:56:06 AM	No	52.6	56.8	54	48.4
		50.8			

Time	Overload	Leq	Lmax	L10	L90
10:17:37 PM	No	51	53.8	52.7	48.4
10:18:37 PM	No	46.6	49.9	48.1	43.4
10:19:37 PM	No	49.3	52.2	51.6	44.3
10:20:37 PM	No	50.8	53.5	52.5	47.8
10:21:37 PM	No	49.4	52.6	51.4	44.5
10:22:37 PM	No	49.2	53.6	52.4	44.7
10:23:37 PM	No	48.2	53.1	51	44.6
10:24:37 PM	No	49	53.5	52.2	44.5
10:25:37 PM	No	49.2	52.9	51.3	46.1
10:26:37 PM	No	49.7	52.9	52.1	46.8
10:27:37 PM	No	51.9	55.4	53.7	49.2
10:28:37 PM	No	49.5	53.5	52.7	44
10:29:37 PM	No	47.2	51.7	50.1	43.1
10:30:37 PM	No	48.7	51.6	50.8	47.1
10:31:37 PM	No	49.7	53.7	52.7	46.4
		49.5			

Construction Noise & Vibration Calculations

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project
On-Site Construction Noise Analysis

PRIOR TO MITIGATION

Rec.	Description	Closest Distance	Site Prep/ Demo	Grading/ Excavation	Mat Foundation	Foundation/ Concrete	Building Construction	Finishes/ Architect. Coating	Paving Landscaping	Infrastructure
			Estimated Construction Noise Levels, dBA Leq							
R1		10	97.5	92.5	89.2	97.2	97.4	88.5	94.4	60.4
R2		10	97.5	92.5	89.2	97.2	97.4	88.5	94.4	83.0
R3		425	70.0	66.7	63.5	68.6	67.6	62.2	66.0	60.9
R4		315	72.5	69.2	66.0	71.0	70.1	64.9	68.5	63.0
R5		155	69.9	64.8	61.5	66.4	66.0	59.9	64.3	51.0
R6		10	97.5	92.5	89.2	97.2	97.4	88.5	94.4	67.4

WITH MITIGATION MEASURES

Rec.	Noise Reduction by Mitigation Measures	Closest Distance	Site Prep/ Demo	Grading/ Excavation	Mat Foundation	Foundation/ Concrete	Building Construction	Finishes/ Architect. Coating	Paving Landscaping	Infrastructure
			Estimated Construction Noise Levels, dBA Leq							
R1	15	10	82.5	77.5	74.2	82.2	82.4	73.5	79.4	55.4
R2	15	10	82.5	77.5	74.2	82.2	82.4	73.5	79.4	83.0
R3	9	425	61.0	57.7	54.5	59.6	58.6	53.2	57.0	60.9
R4	5	315	67.5	64.2	61.0	66.0	65.1	59.9	63.5	63.0
R5	7	155	62.9	57.8	54.5	59.4	59.0	52.9	57.3	46.0
R6	15	10	82.5	77.5	74.2	82.2	82.4	73.5	79.4	57.4

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Site Prep/ Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	10	0
Tractors/Loaders/Backhoes	1	84	40%	25	0
Water Truck	1	82	10%	50	0
Rubber Tired Loaders	1	79	40%	50	0
Rubber Tired Dozers	1	82	40%	75	0
Concrete/Industrial Saw	1	90	20%	75	0
Tractors/Loaders/Backhoes	1	84	40%	100	0
Rubber Tired Loaders	1	79	40%	100	0
Rubber Tired Dozers	1	82	40%	125	0
Air Compressor	1	78	40%	125	0
	10				

Receptor: ***R1***

Results:

1-hour Leq: 97.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	10	0
Tractors/Loaders/Backhoes	1	84	40%	25	0
Water Truck	1	82	10%	50	0
Excavator	1	81	40%	50	0
Rubber Tired Loaders	1	79	40%	75	0
Rubber Tired Dozers	1	82	40%	75	0
Forklift	1	75	20%	100	0
Welders	1	74	40%	100	0
Excavator	1	81	40%	125	0
	9				

Receptor: ***R1***

Results:

1-hour Leq: 92.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Pumps	1	81	20%	10	0
Cement/Mortar Mixers	1	79	40%	25	0
Welders	1	74	40%	50	0
Pumps	1	81	20%	50	0
Cement/Mortar Mixers	1	79	40%	75	0
Welders	1	74	40%	75	0
Pumps	2	81	20%	100	0
	8				

Receptor: ***R1***

Results:

1-hour Leq: 89.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Foundation/Concrete***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	10	0
Plate Compactors	1	83	20%	25	0
Crane (Mobile)	1	81	16%	50	0
Forklift	1	75	20%	50	0
Pumps	1	81	20%	75	0
Welders	1	74	40%	75	0
Rough Terrain Forklifts	1	83	40%	100	0
Crane (Tower)	1	81	16%	100	0
Plate Compactors	1	83	20%	125	0
Forklift	1	75	20%	125	0
Pumps	1	81	20%	150	0
Welders	1	74	40%	150	0
Rough Terrain Forklifts	1	83	40%	175	0
Plate Compactors	2	83	20%	175	0
	15				

Receptor: ***R1***

Results:

1-hour Leq: 97.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saws	1	90	20%	10	0
Tractors/Loaders/Backhoes	1	84	40%	25	0
Crane (Mobile)	1	81	16%	50	0
Forklift	3	75	20%	50	0
Air Compressor	2	78	40%	75	0
Aerial Lifts	2	75	20%	75	0
Crane (Tower)	1	81	16%	100	0
Welders	1	74	40%	100	0
	12				

Receptor: ***R1***

Results:

1-hour Leq: 97.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Finishes/Architectural Coating***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Air Compressor	1	78	40%	10	0
Aerial Lift	1	75	20%	25	0
Fork Lift	1	75	20%	50	0
Air Compressor	1	78	40%	50	0
Aerial Lift	1	75	20%	75	0
Fork Lift	1	75	20%	75	0
Air Compressor	2	78	40%	100	0
Aerial Lift	2	75	20%	100	0
Fork Lift	1	75	20%	125	0
	11				

Receptor: ***R1***

Results:

1-hour Leq: 88.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Paving Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	10	0
Plate Compactors	1	83	20%	25	0
Paving Equipment	1	77	50%	50	0
Cement/Mortar Mixers	1	79	40%	50	0
Trencher	1	80	50%	75	0
Skid Steer Loaders	2	79	40%	75	0
	7				

Receptor: ***R1***

Results:

1-hour Leq: 94.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Off-Site Infrastructure***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe/Loader	1	79	40%	270	0
	1				

Receptor: ***R1***

Results:

1-hour Leq: 60.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Site Prep/ Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	10	0
Tractors/Loaders/Backhoes	1	84	40%	25	0
Water Truck	1	82	10%	50	0
Rubber Tired Loaders	1	79	40%	50	0
Rubber Tired Dozers	1	82	40%	75	0
Concrete/Industrial Saw	1	90	20%	75	0
Tractors/Loaders/Backhoes	1	84	40%	100	0
Rubber Tired Loaders	1	79	40%	100	0
Rubber Tired Dozers	1	82	40%	125	0
Air Compressor	1	78	40%	125	0
	10				

Receptor: ***R2***

Results:

1-hour Leq: 97.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	10	0
Tractors/Loaders/Backhoes	1	84	40%	25	0
Water Truck	1	82	10%	50	0
Excavator	1	81	40%	50	0
Rubber Tired Loaders	1	79	40%	75	0
Rubber Tired Dozers	1	82	40%	75	0
Forklift	1	75	20%	100	0
Welders	1	74	40%	100	0
Excavator	1	81	40%	125	0
	9				

Receptor: ***R2***

Results:

1-hour Leq: 92.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Pumps	1	81	20%	10	0
Cement/Mortar Mixers	1	79	40%	25	0
Welders	1	74	40%	50	0
Pumps	1	81	20%	50	0
Cement/Mortar Mixers	1	79	40%	75	0
Welders	1	74	40%	75	0
Pumps	2	81	20%	100	0
	8				

Receptor: ***R2***

Results:

1-hour Leq: 89.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Foundation/Concrete***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	10	0
Plate Compactors	1	83	20%	25	0
Crane (Mobile)	1	81	16%	50	0
Forklift	1	75	20%	50	0
Pumps	1	81	20%	75	0
Welders	1	74	40%	75	0
Rough Terrain Forklifts	1	83	40%	100	0
Crane (Tower)	1	81	16%	100	0
Plate Compactors	1	83	20%	125	0
Forklift	1	75	20%	125	0
Pumps	1	81	20%	150	0
Welders	1	74	40%	150	0
Rough Terrain Forklifts	1	83	40%	175	0
Plate Compactors	2	83	20%	175	0
	15				

Receptor: ***R2***

Results:

1-hour Leq: 97.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saws	1	90	20%	10	0
Tractors/Loaders/Backhoes	1	84	40%	25	0
Crane (Mobile)	1	81	16%	50	0
Forklift	3	75	20%	50	0
Air Compressor	2	78	40%	75	0
Aerial Lifts	2	75	20%	75	0
Crane (Tower)	1	81	16%	100	0
Welders	1	74	40%	100	0
	12				

Receptor: ***R2***

Results:

1-hour Leq: 97.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Finishes/Architectural Coating***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Air Compressor	1	78	40%	10	0
Aerial Lift	1	75	20%	25	0
Fork Lift	1	75	20%	50	0
Air Compressor	1	78	40%	50	0
Aerial Lift	1	75	20%	75	0
Fork Lift	1	75	20%	75	0
Air Compressor	2	78	40%	100	0
Aerial Lift	2	75	20%	100	0
Fork Lift	1	75	20%	125	0
	11				

Receptor: ***R2***

Results:

1-hour Leq: 88.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Paving Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	10	0
Plate Compactors	1	83	20%	25	0
Paving Equipment	1	77	50%	50	0
Cement/Mortar Mixers	1	79	40%	50	0
Trencher	1	80	50%	75	0
Skid Steer Loaders	2	79	40%	75	0
	7				

Receptor: ***R2***

Results:

1-hour Leq: 94.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Off-Site Infrastructure***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe/Loader	1	79	40%	20	0
	1				

Receptor: ***R2***

Results:

1-hour Leq: 83.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Site Prep/ Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	425	0
Tractors/Loaders/Backhoes	1	84	40%	425	0
Water Truck	1	82	10%	445	0
Rubber Tired Loaders	1	79	40%	445	0
Rubber Tired Dozers	1	82	40%	465	0
Concrete/Industrial Saw	1	90	20%	465	0
Tractors/Loaders/Backhoes	1	84	40%	485	0
Rubber Tired Loaders	1	79	40%	485	0
Rubber Tired Dozers	1	82	40%	505	0
Air Compressor	1	78	40%	505	0
	10				

Receptor: ***R3***

Results:

1-hour Leq: 70.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	425	0
Tractors/Loaders/Backhoes	1	84	40%	425	0
Water Truck	1	82	10%	445	0
Excavator	1	81	40%	445	0
Rubber Tired Loaders	1	79	40%	465	0
Rubber Tired Dozers	1	82	40%	465	0
Forklift	1	75	20%	485	0
Welders	1	74	40%	485	0
Excavator	1	81	40%	505	0
	9				

Receptor: ***R3***

Results:

1-hour Leq: 66.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Pumps	1	81	20%	425	0
Cement/Mortar Mixers	1	79	40%	425	0
Welders	1	74	40%	445	0
Pumps	1	81	20%	445	0
Cement/Mortar Mixers	1	79	40%	465	0
Welders	1	74	40%	465	0
Pumps	2	81	20%	485	0
	8				

Receptor: ***R3***

Results:

1-hour Leq: 63.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Foundation/Concrete***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	425	0
Plate Compactors	1	83	20%	425	0
Crane (Mobile)	1	81	16%	445	0
Forklift	1	75	20%	445	0
Pumps	1	81	20%	465	0
Welders	1	74	40%	465	0
Rough Terrain Forklifts	1	83	40%	485	0
Crane (Tower)	1	81	16%	485	0
Plate Compactors	1	83	20%	505	0
Forklift	1	75	20%	505	0
Pumps	1	81	20%	525	0
Welders	1	74	40%	525	0
Rough Terrain Forklifts	1	83	40%	545	0
Plate Compactors	2	83	20%	545	0
	15				

Receptor: ***R3***

Results:

1-hour Leq: 68.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saws	1	90	20%	425	0
Tractors/Loaders/Backhoes	1	84	40%	425	0
Crane (Mobile)	1	81	16%	445	0
Forklift	3	75	20%	445	0
Air Compressor	2	78	40%	465	0
Aerial Lifts	2	75	20%	465	0
Crane (Tower)	1	81	16%	485	0
Welders	1	74	40%	485	0
	12				

Receptor: ***R3***

Results:

1-hour Leq: 67.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Finishes/Architectural Coating***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Air Compressor	1	78	40%	430	0
Aerial Lift	1	75	20%	430	0
Fork Lift	1	75	20%	450	0
Air Compressor	1	78	40%	450	0
Aerial Lift	1	75	20%	470	0
Fork Lift	1	75	20%	470	0
Air Compressor	2	78	40%	490	0
Aerial Lift	2	75	20%	490	0
Fork Lift	1	75	20%	510	0
	11				

Receptor: ***R3***

Results:

1-hour Leq: 62.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Paving Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	425	0
Plate Compactors	1	83	20%	425	0
Paving Equipment	1	77	50%	445	0
Cement/Mortar Mixers	1	79	40%	445	0
Trencher	1	80	50%	465	0
Skid Steer Loaders	2	79	40%	465	0
	7				

Receptor: ***R3***

Results:

1-hour Leq: 66.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Off-Site Infrastructure***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe/Loader	1	79	40%	255	0
	1				

Receptor: ***R3***

Results:

1-hour Leq: 60.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Site Prep/ Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	315	0
Tractors/Loaders/Backhoes	1	84	40%	315	0
Water Truck	1	82	10%	335	0
Rubber Tired Loaders	1	79	40%	335	0
Rubber Tired Dozers	1	82	40%	355	0
Concrete/Industrial Saw	1	90	20%	355	0
Tractors/Loaders/Backhoes	1	84	40%	375	0
Rubber Tired Loaders	1	79	40%	375	0
Rubber Tired Dozers	1	82	40%	395	0
Air Compressor	1	78	40%	395	0
	10				

Receptor: ***R4***

Results:

1-hour Leq: 72.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	315	0
Tractors/Loaders/Backhoes	1	84	40%	315	0
Water Truck	1	82	10%	335	0
Excavator	1	81	40%	335	0
Rubber Tired Loaders	1	79	40%	355	0
Rubber Tired Dozers	1	82	40%	355	0
Forklift	1	75	20%	375	0
Welders	1	74	40%	375	0
Excavator	1	81	40%	395	0
	9				

Receptor: ***R4***

Results:

1-hour Leq: 69.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Pumps	1	81	20%	315	0
Cement/Mortar Mixers	1	79	40%	315	0
Welders	1	74	40%	335	0
Pumps	1	81	20%	335	0
Cement/Mortar Mixers	1	79	40%	355	0
Welders	1	74	40%	355	0
Pumps	2	81	20%	375	0
	8				

Receptor: ***R4***

Results:

1-hour Leq: 66.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Foundation/Concrete***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	315	0
Plate Compactors	1	83	20%	315	0
Crane (Mobile)	1	81	16%	335	0
Forklift	1	75	20%	335	0
Pumps	1	81	20%	355	0
Welders	1	74	40%	355	0
Rough Terrain Forklifts	1	83	40%	375	0
Crane (Tower)	1	81	16%	375	0
Plate Compactors	1	83	20%	395	0
Forklift	1	75	20%	395	0
Pumps	1	81	20%	415	0
Welders	1	74	40%	415	0
Rough Terrain Forklifts	1	83	40%	435	0
Plate Compactors	2	83	20%	435	0
	15				

Receptor: ***R4***

Results:

1-hour Leq: 71.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saws	1	90	20%	315	0
Tractors/Loaders/Backhoes	1	84	40%	315	0
Crane (Mobile)	1	81	16%	335	0
Forklift	3	75	20%	335	0
Air Compressor	2	78	40%	355	0
Aerial Lifts	2	75	20%	355	0
Crane (Tower)	1	81	16%	375	0
Welders	1	74	40%	375	0
	12				

Receptor: ***R4***

Results:

1-hour Leq: 70.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Finishes/Architectural Coating***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Air Compressor	1	78	40%	310	0
Aerial Lift	1	75	20%	310	0
Fork Lift	1	75	20%	330	0
Air Compressor	1	78	40%	330	0
Aerial Lift	1	75	20%	350	0
Fork Lift	1	75	20%	350	0
Air Compressor	2	78	40%	370	0
Aerial Lift	2	75	20%	370	0
Fork Lift	1	75	20%	390	0
	11				

Receptor: ***R4***

Results:

1-hour Leq: 64.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Paving Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	315	0
Plate Compactors	1	83	20%	315	0
Paving Equipment	1	77	50%	335	0
Cement/Mortar Mixers	1	79	40%	335	0
Trencher	1	80	50%	355	0
Skid Steer Loaders	2	79	40%	355	0
	7				

Receptor: ***R4***

Results:

1-hour Leq: 68.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Off-Site Infrastructure***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe/Loader	1	79	40%	200	0
	1				

Receptor: ***R4***

Results:

1-hour Leq: 63.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Site Prep/ Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	155	10
Tractors/Loaders/Backhoes	1	84	40%	155	10
Water Truck	1	82	10%	180	10
Rubber Tired Loaders	1	79	40%	180	10
Rubber Tired Dozers	1	82	40%	205	10
Concrete/Industrial Saw	1	90	20%	205	10
Tractors/Loaders/Backhoes	1	84	40%	100	10
Rubber Tired Loaders	1	79	40%	100	10
Rubber Tired Dozers	1	82	40%	125	10
Air Compressor	1	78	40%	125	10
	10				

Receptor: ***R5***

Results:

1-hour Leq: 69.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	155	10
Tractors/Loaders/Backhoes	1	84	40%	155	10
Water Truck	1	82	10%	175	10
Excavator	1	81	40%	175	10
Rubber Tired Loaders	1	79	40%	195	10
Rubber Tired Dozers	1	82	40%	195	10
Forklift	1	75	20%	215	10
Welders	1	74	40%	215	10
Excavator	1	81	40%	235	10
	9				

Receptor: ***R5***

Results:

1-hour Leq: 64.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Pumps	1	81	20%	155	10
Cement/Mortar Mixers	1	79	40%	155	10
Welders	1	74	40%	175	10
Pumps	1	81	20%	175	10
Cement/Mortar Mixers	1	79	40%	195	10
Welders	1	74	40%	195	10
Pumps	2	81	20%	215	10
	8				

Receptor: ***R5***

Results:

1-hour Leq: 61.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Foundation/Concrete***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	155	10
Plate Compactors	1	83	20%	155	10
Crane (Mobile)	1	81	16%	175	10
Forklift	1	75	20%	175	10
Pumps	1	81	20%	195	10
Welders	1	74	40%	195	10
Rough Terrain Forklifts	1	83	40%	215	10
Crane (Tower)	1	81	16%	215	10
Plate Compactors	1	83	20%	235	10
Forklift	1	75	20%	235	10
Pumps	1	81	20%	255	10
Welders	1	74	40%	255	10
Rough Terrain Forklifts	1	83	40%	275	10
Plate Compactors	2	83	20%	275	10
	15				

Receptor: ***R5***

Results:

1-hour Leq: 66.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saws	1	90	20%	155	10
Tractors/Loaders/Backhoes	1	84	40%	155	10
Crane (Mobile)	1	81	16%	175	10
Forklift	3	75	20%	175	10
Air Compressor	2	78	40%	195	10
Aerial Lifts	2	75	20%	195	10
Crane (Tower)	1	81	16%	215	10
Welders	1	74	40%	215	10
	12				

Receptor: ***R5***

Results:

1-hour Leq: 66.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Finishes/Architectural Coating***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Air Compressor	1	78	40%	160	10
Aerial Lift	1	75	20%	160	10
Fork Lift	1	75	20%	180	10
Air Compressor	1	78	40%	180	10
Aerial Lift	1	75	20%	200	10
Fork Lift	1	75	20%	200	10
Air Compressor	2	78	40%	220	10
Aerial Lift	2	75	20%	220	10
Fork Lift	1	75	20%	240	10
	11				

Receptor: ***R5***

Results:

1-hour Leq: 59.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Paving Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	155	10
Plate Compactors	1	83	20%	155	10
Paving Equipment	1	77	50%	175	10
Cement/Mortar Mixers	1	79	40%	175	10
Trencher	1	80	50%	195	10
Skid Steer Loaders	2	79	40%	195	10
	7				

Receptor: ***R5***

Results:

1-hour Leq: 64.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Off-Site Infrastructure***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe/Loader	1	79	40%	250	10
	1				

Receptor: ***R5***

Results:

1-hour Leq: 51.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Site Prep/ Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	10	0
Tractors/Loaders/Backhoes	1	84	40%	25	0
Water Truck	1	82	10%	50	0
Rubber Tired Loaders	1	79	40%	50	0
Rubber Tired Dozers	1	82	40%	75	0
Concrete/Industrial Saw	1	90	20%	75	0
Tractors/Loaders/Backhoes	1	84	40%	100	0
Rubber Tired Loaders	1	79	40%	100	0
Rubber Tired Dozers	1	82	40%	125	0
Air Compressor	1	78	40%	125	0
	10				

Receptor: ***R6***

Results:

1-hour Leq: 97.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	10	0
Tractors/Loaders/Backhoes	1	84	40%	25	0
Water Truck	1	82	10%	50	0
Excavator	1	81	40%	50	0
Rubber Tired Loaders	1	79	40%	75	0
Rubber Tired Dozers	1	82	40%	75	0
Forklift	1	75	20%	100	0
Welders	1	74	40%	100	0
Excavator	1	81	40%	125	0
	9				

Receptor: ***R6***

Results:

1-hour Leq: 92.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Pumps	1	81	20%	10	0
Cement/Mortar Mixers	1	79	40%	25	0
Welders	1	74	40%	50	0
Pumps	1	81	20%	50	0
Cement/Mortar Mixers	1	79	40%	75	0
Welders	1	74	40%	75	0
Pumps	2	81	20%	100	0
	8				

Receptor: ***R6***

Results:

1-hour Leq: 89.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Foundation/Concrete***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	10	0
Plate Compactors	1	83	20%	25	0
Crane (Mobile)	1	81	16%	50	0
Forklift	1	75	20%	50	0
Pumps	1	81	20%	75	0
Welders	1	74	40%	75	0
Rough Terrain Forklifts	1	83	40%	100	0
Crane (Tower)	1	81	16%	100	0
Plate Compactors	1	83	20%	125	0
Forklift	1	75	20%	125	0
Pumps	1	81	20%	150	0
Welders	1	74	40%	150	0
Rough Terrain Forklifts	1	83	40%	175	0
Plate Compactors	2	83	20%	175	0
	15				

Receptor: ***R6***

Results:

1-hour Leq: 97.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saws	1	90	20%	10	0
Tractors/Loaders/Backhoes	1	84	40%	25	0
Crane (Mobile)	1	81	16%	50	0
Forklift	3	75	20%	50	0
Air Compressor	2	78	40%	75	0
Aerial Lifts	2	75	20%	75	0
Crane (Tower)	1	81	16%	100	0
Welders	1	74	40%	100	0
	12				

Receptor: ***R6***

Results:

1-hour Leq: 97.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Finishes/Architectural Coating***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Air Compressor	1	78	40%	10	0
Aerial Lift	1	75	20%	25	0
Fork Lift	1	75	20%	50	0
Air Compressor	1	78	40%	50	0
Aerial Lift	1	75	20%	75	0
Fork Lift	1	75	20%	75	0
Air Compressor	2	78	40%	100	0
Aerial Lift	2	75	20%	100	0
Fork Lift	1	75	20%	125	0
	11				

Receptor: ***R6***

Results:

1-hour Leq: 88.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Paving Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	10	0
Plate Compactors	1	83	20%	25	0
Paving Equipment	1	77	50%	50	0
Cement/Mortar Mixers	1	79	40%	50	0
Trencher	1	80	50%	75	0
Skid Steer Loaders	2	79	40%	75	0
	7				

Receptor: ***R6***

Results:

1-hour Leq: 94.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Construction Phase: ***Off-Site Infrastructure***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe/Loader	1	79	40%	120	0
	1				

Receptor: ***R6***

Results:

1-hour Leq: 67.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Bellwood Project

Off-Site Construction Traffic (Trucks and Workers)

Phase	Maximum Number of Truck One Way Trips (delivery/haul) Per Day	Per Hour (8-hr day)	Worker Trips Daily Trips	Trips during Pk Hr.	Project Construction Traffic Noise Levels, dBA (from TNM) Olympic	Century Park East	Pico	Overland	La Cienega
1. Site Prep/Demolition	30	2	30	12	58.0	57.3	57.3	58.0	57.3
2. Grading/Excavation	172	13	30	12	65.3	64.6	64.6	65.3	64.6
3. Mat Foundation	400	13	30	12	65.3	64.6	64.6	65.3	64.6
4. Foundation/Concrete	100	7	100	40	63.4	62.7	62.7	63.4	62.7
5. Building Construction	50	4	180	72	62.6	61.8	61.8	62.6	61.8
6. Finishes/Arch. Coating	50	4	200	80	62.8	62.0	62.0	62.8	62.0
7. Paving/Landscaping	20	2	40	16	58.3	57.6	57.6	58.3	57.6
Mat foundation - 12 hours				Ambient, dBA	67.3	61.5	65.8	62.3	64.6
Grading - 6 hours				Significance Criteria, dBA	72.3	66.5	70.8	67.3	69.6
Trucks are one-way				Existing Traffic Volume	4686	1242	3333	1477	2522

	Project + Ambient Noise Levels, dBA Olympic	Century Park East	Pico	Overland	La Cienega
1. Site Prep/Demolition	67.8	62.9	66.4	63.7	65.3
2. Grading/Excavation	69.4	66.3	68.3	67.1	67.6
3. Mat Foundation	69.4	66.3	68.3	67.1	67.6
4. Foundation/Concrete	68.8	65.2	67.5	65.9	66.8
5. Building Construction	68.6	64.7	67.3	65.5	66.4
6. Finishes/Arch. Coating	68.6	64.8	67.3	65.6	66.5
8. Paving/Landscaping	67.8	63.0	66.4	63.8	65.4
Ambient, dBA	67.3	61.5	65.8	62.3	64.6
Significance Criteria, dBA	72.3	66.5	70.8	67.3	69.6

	Increase over Ambient, dBA Olympic	Century Park East	Pico	Overland	La Cienega
1. Site Prep/Demolition	0.5	1.4	0.6	1.4	0.7
2. Grading/Excavation	2.1	4.8	2.5	4.8	3.0
3. Mat Foundation	2.1	4.8	2.5	4.8	3.0
4. Foundation/Concrete	1.5	3.7	1.7	3.6	2.2
5. Building Construction	1.3	3.2	1.5	3.2	1.8
6. Finishes/Arch. Coating	1.3	3.3	1.5	3.3	1.9
8. Paving/Landscaping	0.5	1.5	0.6	1.5	0.8
Impact	No	No	No	No	No

Eyestone Environmental					**20 April 2020**						
Sean Bui					**TNM 2.5**						
INPUT: ROADWAYS							**Average pavement type shall be used unless**				
PROJECT/CONTRACT:	**Bellwood Project**						**a State highway agency substantiates the use**				
RUN:	**Demo Phase**						**of a different type with the approval of FHWA**				
Roadway		**Points**									
Name	**Width**	**Name**	**No.**	**Coordinates (pavement)**			**Flow Control**			**Segment**	
				X	**Y**	**Z**	**Control**	**Speed**	**Percent**	**Pvmt**	**On**
							Device	**Constraint**	**Vehicles**	**Type**	**Struct?**
									Affected		
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **20 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Bellwood Project**
RUN: **Demo Phase**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	12	35	0	0	2	35	0	0	0	0
	point2	2										

Eyestone Environmental **20 April 2020**
Sean Bui **TNM 2.5**

INPUT: RECEIVERS
PROJECT/CONTRACT: **Bellwood Project**
RUN: **Demo Phase**

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along Olympic Blvd & Overland	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Pico Blvd. CPE & La Cienega	10	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

20 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Bellwood Project
RUN: Demo Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver												
Name	No.	#DUs	Existing	No Barrier					With Barrier			
			LAeq1h	LAeq1h		Increase over existing		Type	Calculated	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n	Impact	LAeq1h	Calculated	Goal	Calculated
							Sub'l Inc					minus
												Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Olympic Blvd & Overland	1	1	0.0	58.0	71	58.0	5	----	58.0	0.0	0	0.0
Along Pico Blvd. CPE & La Cienega	10	1	0.0	57.3	66	57.3	10	----	57.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	2	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental 1 February 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Bellwood Project
RUN: Grading/Excavation Phase

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental 1 February 2021
Sean Bui TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Bellwood Project
RUN: Grading/Excavation Phase

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	12	35	0	0	13	35	0	0	0	0
	point2	2										

Eyestone Environmental
Sean Bui

1 February 2021
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Bellwood Project
RUN: Grading/Excavation Phase

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along Olympic Blvd & Overland	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Pico Blvd. CPE & La Cienega	10	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

1 February 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Bellwood Project
RUN: Grading/Excavation Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver												
Name	No.	#DUs	Existing	No Barrier					With Barrier			
			LAeq1h	LAeq1h		Increase over existing		Type	Calculated	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc	Impact	LAeq1h	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Olympic Blvd & Overland	1	1	0.0	65.3	71	65.3	5	----	65.3	0.0	0	0.0
Along Pico Blvd. CPE & La Cienega	10	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	2	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental 1 February 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Bellwood Project
RUN: Mat Foundation Phase

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental 1 February 2021
Sean Bui TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Bellwood Project
RUN: Mat Foundation Phase

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	12	35	0	0	13	35	0	0	0	0
	point2	2										

Eyestone Environmental
Sean Bui

1 February 2021
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Bellwood Project
RUN: Mat Foundation Phase

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along Olympic Blvd & Overland	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Pico Blvd. CPE & La Cienega	10	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

1 February 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Bellwood Project
RUN: Mat Foundation Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Olympic Blvd & Overland	1	1	0.0	65.3	71	65.3	5	----	65.3	0.0	0	0.0
Along Pico Blvd. CPE & La Cienega	10	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	2	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental					20 April 2020						
Sean Bui					TNM 2.5						
INPUT: ROADWAYS							Average pavement type shall be used unless				
PROJECT/CONTRACT:	Bellwood Project						a State highway agency substantiates the use				
RUN:	Foundation/Concrete Phase						of a different type with the approval of FHWA				
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control	Speed	Percent	Pvmt	On
							Device	Constraint	Vehicles	Type	Struct?
									Affected		
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **20 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Bellwood Project**
RUN: **Foundation/Concrete Phase**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	40	35	0	0	7	35	0	0	0	0
	point2	2										

Eyestone Environmental **20 April 2020**
Sean Bui **TNM 2.5**

INPUT: RECEIVERS
PROJECT/CONTRACT: **Bellwood Project**
RUN: **Foundation/Concrete Phase**

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along Olympic Blvd & Overland	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Pico Blvd. CPE & La Cienega	10	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental							**20 April 2020**					
Sean Bui							**TNM 2.5**					
							Calculated with TNM 2.5					
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		**Bellwood Project**										
RUN:		**Foundation/Concrete Phase**										
BARRIER DESIGN:		**INPUT HEIGHTS**						**Average pavement type shall be used unless**				
								a State highway agency substantiates the use				
ATMOSPHERICS:		**68 deg F, 50% RH**						**of a different type with approval of FHWA.**				
Receiver												
Name	**No.**	**#DUs**	**Existing**	**No Barrier**					**With Barrier**			
			LAeq1h	**LAeq1h**		**Increase over existing**		**Type**	**Calculated**	**Noise Reduction**		
				Calculated	**Crit'n**	**Calculated**	**Crit'n**	**Impact**	**LAeq1h**	**Calculated**	**Goal**	**Calculated**
							Sub'l Inc					**minus**
												Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Olympic Blvd & Overland	1	1	0.0	63.4	71	63.4	5	----	63.4	0.0	0	0.0
Along Pico Blvd. CPE & La Cienega	10	1	0.0	62.7	66	62.7	10	----	62.7	0.0	8	-8.0
Dwelling Units		**# DUs**	**Noise Reduction**									
			Min	**Avg**	**Max**							
			dB	**dB**	**dB**							
All Selected		2	0.0	0.0	0.0							
All Impacted		0	0.0	0.0	0.0							
All that meet NR Goal		1	0.0	0.0	0.0							

Eyestone Environmental					20 April 2020						
Sean Bui					TNM 2.5						
INPUT: ROADWAYS							Average pavement type shall be used unless				
PROJECT/CONTRACT:	Bellwood Project						a State highway agency substantiates the use				
RUN:	Building Construction Phase						of a different type with the approval of FHWA				
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control	Speed	Percent	Pvmt	On
							Device	Constraint	Vehicles	Type	Struct?
									Affected		
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **20 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Bellwood Project**
RUN: **Building Construction Phase**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	72	35	0	0	4	35	0	0	0	0
	point2	2										

Eyestone Environmental **20 April 2020**
Sean Bui **TNM 2.5**

INPUT: RECEIVERS
PROJECT/CONTRACT: **Bellwood Project**
RUN: **Building Construction Phase**

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along Olympic Blvd & Overland	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Pico Blvd. CPE & La Cienega	10	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental — **20 April 2020**
Sean Bui — **TNM 2.5**
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Bellwood Project
RUN: Building Construction Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Olympic Blvd & Overland	1	1	0.0	62.6	71	62.6	5	----	62.6	0.0	0	0.0
Along Pico Blvd. CPE & La Cienega	10	1	0.0	61.8	66	61.8	10	----	61.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	2	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental					**20 April 2020**						
Sean Bui					**TNM 2.5**						
INPUT: ROADWAYS							**Average pavement type shall be used unless**				
PROJECT/CONTRACT:	**Bellwood Project**						**a State highway agency substantiates the use**				
RUN:	**Finishes/Arch. Coating Phase**						**of a different type with the approval of FHWA**				
Roadway		**Points**									
Name	**Width**	**Name**	**No.**	**Coordinates (pavement)**			**Flow Control**			**Segment**	
				X	**Y**	**Z**	**Control**	**Speed**	**Percent**	**Pvmt**	**On**
							Device	**Constraint**	**Vehicles**	**Type**	**Struct?**
									Affected		
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **20 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Bellwood Project**
RUN: **Finishes/Arch. Coating Phase**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	80	35	0	0	4	35	0	0	0	0
	point2	2										

Eyestone Environmental **20 April 2020**
Sean Bui **TNM 2.5**

INPUT: RECEIVERS
PROJECT/CONTRACT: **Bellwood Project**
RUN: **Finishes/Arch. Coating Phase**

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along Olympic Blvd & Overland	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Pico Blvd. CPE & La Cienega	10	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental 20 April 2020
Sean Bui TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Bellwood Project
RUN: Finishes/Arch. Coating Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver												
Name	No.	#DUs	Existing	No Barrier					With Barrier			
			LAeq1h	LAeq1h		Increase over existing		Type	Calculated	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n	Impact	LAeq1h	Calculated	Goal	Calculated
							Sub'l Inc					minus
												Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Olympic Blvd & Overland	1	1	0.0	62.8	71	62.8	5	----	62.8	0.0	0	0.0
Along Pico Blvd. CPE & La Cienega	10	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	2	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental					20 April 2020						
Sean Bui					TNM 2.5						
INPUT: ROADWAYS							Average pavement type shall be used unless				
PROJECT/CONTRACT:	Bellwood Project						a State highway agency substantiates the use				
RUN:	Paving/Landscaping Phase						of a different type with the approval of FHWA				
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control	Speed	Percent	Pvmt	On
							Device	Constraint	Vehicles	Type	Struct?
									Affected		
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **20 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Bellwood Project**
RUN: **Paving/Landscaping Phase**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	16	35	0	0	2	35	0	0	0	0
	point2	2										

Eyestone Environmental **20 April 2020**
Sean Bui **TNM 2.5**

INPUT: RECEIVERS
PROJECT/CONTRACT: **Bellwood Project**
RUN: **Paving/Landscaping Phase**

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along Olympic Blvd & Overland	1	1	250.0	25.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Pico Blvd. CPE & La Cienega	10	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental							**20 April 2020**					
Sean Bui							**TNM 2.5**					
							Calculated with TNM 2.5					
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		**Bellwood Project**										
RUN:		**Paving/Landscaping Phase**										
BARRIER DESIGN:		**INPUT HEIGHTS**						**Average pavement type shall be used unless**				
								a State highway agency substantiates the use				
ATMOSPHERICS:		**68 deg F, 50% RH**						**of a different type with approval of FHWA.**				
Receiver												
Name	**No.**	**#DUs**	**Existing**	**No Barrier**					**With Barrier**			
			LAeq1h	**LAeq1h**		**Increase over existing**		**Type**	**Calculated**	**Noise Reduction**		
				Calculated	**Crit'n**	**Calculated**	**Crit'n**	**Impact**	**LAeq1h**	**Calculated**	**Goal**	**Calculated**
							Sub'l Inc					**minus**
												Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Olympic Blvd & Overland	1	1	0.0	58.3	71	58.3	5	----	58.3	0.0	0	0.0
Along Pico Blvd. CPE & La Cienega	10	1	0.0	57.6	66	57.6	10	----	57.6	0.0	8	-8.0
Dwelling Units		**# DUs**	**Noise Reduction**									
			Min	**Avg**	**Max**							
			dB	**dB**	**dB**							
All Selected		2	0.0	0.0	0.0							
All Impacted		0	0.0	0.0	0.0							
All that meet NR Goal		1	0.0	0.0	0.0							

Project: Bellwood Project EIR

Construction Vibration Impacts - Prior to Mitigations

Reference Levels at 25 feet are based on FTA, 2006 (Transit Noise and Vibration Impact Assessment)
Calculations using FTA procedure with n= **1.5** (for receptors 25 feet or greater)
n= **1.1** (for receptors less than 25 feet, per Caltrans procedure)

ON-SITE CONSTRUCTION ACTIVITIES

Table 1: Construction Equipment Vibration Levels (PPV) - Building Damages

Equipment	Reference Vibration Levels at 25 ft., PPV	Estimated Vibration Levels at nearest off-site building structures (distance in feet), PPV						
		Multi-story Courtyard Marriott	Residential buildings along Ortron Ave.	Residential buildings along Keswick Ave.	Residential buildings along Kerwood Ave.	Commercial Building on Bellwood Ave.	Single-story commercial building on Olympic	4-Story Commercial Building on Olympic
		10	30	30	5	5	5	5
Large Bulldozer	0.089	0.244	0.068	0.068	0.523	0.523	0.523	0.523
Caisson Drilling	0.089	0.244	0.068	0.068	0.523	0.523	0.523	0.523
Loaded Trucks	0.076	0.208	0.058	0.058	0.446	0.446	0.446	0.446
Jackhammer	0.035	0.096	0.027	0.027	0.206	0.206	0.206	0.206
Small bulldozer	0.003	0.008	0.002	0.002	0.018	0.018	0.018	0.018
Significance Threshold, PPV		0.5	0.2	0.2	0.2	0.2	0.2	0.5

Table 2: Construction Equipment Vibration Levels (VdB) - Human Annoyance

Equipment	Reference Vibration Levels at 25 ft., VdB	Estimated Vibration Levels at Off-Site Receptors (at note distance in feet), VdB						
		R1	R2	R3	R4	R5	R6	
		30	10	425	315	155	15	
Large Bulldozer	87	85	99	50	54	63	94	
Caisson Drilling	87	85	99	50	54	63	94	
Loaded Trucks	86	84	98	49	53	62	93	
Jackhammer	79	77	91	42	46	55	86	
Small bulldozer	58	56	70	21	25	34	65	
Significance Threshold, VdB		72	72	72	72	72	72	

OFF-SITE CONSTRUCTION HAUL TRUCKS

Table 3: Off-Site Haul Trucks - Building Damage

Equipment	Reference Vibration Levels at 50 ft., PPV	Estimated Vibration Levels at noted distance in feet, PPV						
		10	20					
Typical road surface	0.00565	0.063	0.022					
Significance Threshold, PPV		0.12	0.12					

Ref. Levels based on FTA Figure 7-3 (converted from VdB to PPV)

Table 4: Off-Site Haul Trucks - Human Annoyance

Equipment	Reference Vibration Levels at 50 ft., VdB	Estimated Vibration Levels at noted distance in feet, VdB						
		20	25	30	40	60	80	
Typical road surface	63	75	72	70	66	61	57	
Significance Threshold, VdB		72	72	72	72	72	72	

Ref. Levels based on FTA Figure 7-3

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Project: Bellwood Project EIR

Construction Vibration Impacts - with Mitigations

Reference Levels at 25 feet are based on FTA, 2006 (Transit Noise and Vibration Impact Assessment)
Calculations using FTA procedure with n= **1.5** (for receptors 25 feet or greater)
n= **1.1** (for receptors less than 25 feet, per Caltrans procedure)

ON-SITE CONSTRUCTION ACTIVITIES

Table 1: Construction Equipment Vibration Levels (PPV) - Building Damages

Equipment	Reference Vibration Levels at 25 ft., PPV	Estimated Vibration Levels at nearest off-site building structures (distance in feet), PPV						
		Multi-story Courtyard Marriott	Residential buildings along Ortron Ave.	Residential buildings along Keswick Ave.	Residential buildings along Kerwood Ave.	Commercial Building on Bellwood Ave.	Single-story commercial building on Olympic	4-Story Commercial Building on Olympic
		10	30	30	13	13	13	6
Large Bulldozer	0.089	0.244	0.068	0.068	0.183	0.183	0.183	0.428
Caisson Drilling	0.089	0.244	0.068	0.068	0.183	0.183	0.183	0.428
Loaded Trucks	0.076	0.208	0.058	0.058	0.156	0.156	0.156	0.365
Jackhammer	0.035	0.096	0.027	0.027	0.168	0.168	0.168	0.168
Small bulldozer	0.003	0.008	0.002	0.002	0.048	0.023	0.048	0.014
Significance Threshold, PPV		0.5	0.2	0.2	0.2	0.2	0.2	0.5

Table 2: Construction Equipment Vibration Levels (VdB) - Human Annoyance

Equipment	Reference Vibration Levels at 25 ft., VdB	Estimated Vibration Levels at Off-Site Receptors (at note distance in feet), VdB						
		R1	R2	R3	R4	R5	R6	
		30	10	425	315	155	15	
Large Bulldozer	87	85	99	50	54	63	94	
Caisson Drilling	87	85	99	50	54	63	94	
Loaded Trucks	86	84	98	49	53	62	93	
Jackhammer	79	77	91	42	46	55	86	
Small bulldozer	58	56	70	21	25	34	65	
Significance Threshold, VdB		72	72	72	72	72	72	

OFF-SITE CONSTRUCTION HAUL TRUCKS

Table 3: Off-Site Haul Trucks - Building Damage

Equipment	Reference Vibration Levels at 50 ft., PPV	Estimated Vibration Levels at noted distance in feet, PPV						
		10	20					
Typical road surface	0.00565	0.063	0.022					
Significance Threshold, PPV		0.12	0.12					

Ref. Levels based on FTA Figure 7-3 (converted from VdB to PPV)

Table 4: Off-Site Haul Trucks - Human Annoyance

Equipment	Reference Vibration Levels at 50 ft., VdB	Estimated Vibration Levels at noted distance in feet, VdB						
		20	25	30	40	60	80	
Typical road surface	63	75	72	70	66	61	57	
Significance Threshold, VdB		72	72	72	72	72	72	

Ref. Levels based on FTA Figure 7-3

Operation Noise Calculations

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Project Composite Noise Calculations (CNEL)

Project: Bellwood Project

Receptor	Ambient	Traffic[a]	Mechanical	Loading	Outdoor	Project Composite	Ambient + Project	Increase
R1	59.8	0.0	60.6	21.8	57.6	62.4	64.3	4.5
R2	60.6	0.0	48.5	57.2	45.1	57.9	62.5	1.9
R3	60.2	0.0	43.1	18.8	26.5	43.2	60.3	0.1
R4	69.7	0.0	45.0	10.9	39.3	46.0	69.7	0.0
R5	59.6	0.0	50.6	18.8	39.0	50.9	60.1	0.5
R6	54.5	0.0	48.3	21.3	40.7	49.0	55.5	1.0

[a] - No Project traffic noise, as Project-related would be less than existing conditions.

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Outdoor Mechanical Equipment Noise Calculations

Project: Bellwood Project

			Hours of Operations		
	Estimated Noise Levels, Leq from SOUNDPLAN		Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	12	3	9
R1	53.9	60.6	53.9	53.9	53.9
R2	41.8	48.5	41.8	41.8	41.8
R3	36.4	43.1	36.4	36.4	36.4
R4	38.3	45.0	38.3	38.3	38.3
R5	43.9	50.6	43.9	43.9	43.9
R6	41.6	48.3	41.6	41.6	41.6

Receptor	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	ambient (Leq)	Ambient + Project (Leq)	Increase (Leq)
R1	59.8	63.2	3.4	52.1	56.1	4.0
R2	60.6	60.9	0.3	55.2	55.4	0.2
R3	60.2	60.3	0.1	55.2	55.3	0.1
R4	69.7	69.7	0.0	64.2	64.2	0.0
R5	59.6	60.1	0.5	53.1	53.6	0.5
R6	54.5	55.4	0.9	49.5	50.2	0.7

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Outdoor Noise Calculations

Project: Bellwood Project

ALL LEVEL

	Estimated noise levels, Leq (FROM SOUNDPLAN)				Hours of Operations Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Sound System	Occupants	Total, Leq	CNEL	12	**2**	**0**
R1	50.4	58.1	58.8	57.6	58.8	57.0	0.0
R2	23.2	46.3	46.3	45.1	46.3	44.5	0.0
R3	4.9	27.6	27.6	26.5	27.6	25.8	0.0
R4	20.2	40.5	40.5	39.3	40.5	38.7	0.0
R5	28.5	39.9	40.2	39.0	40.2	38.4	0.0
R6	32.3	41.4	41.9	40.7	41.9	40.1	0.0

TOTAL COMBINED

Receptor	Project (CNEL)	Ambient (CNEL)	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	Ambient (Leq)	Ambient + Project (Leq)
R1	57.6	59.8	61.9	2.1	58.8	56.3	60.7
R2	45.1	60.6	60.8	0.1	46.3	58.2	58.5
R3	26.5	60.2	60.2	0.0	27.6	56.7	56.7
R4	39.3	69.7	69.7	0.0	40.5	67.3	67.3
R5	39.0	59.6	59.6	0.0	40.2	58.8	58.9
R6	40.7	54.5	54.6	0.2	41.9	50.8	51.3

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Loading and Trash Compactor Noise Calculations

Project: Bellwood Project

LOADING & TRASH COMPACTOR

	Estimated Noise Levels, Leq from SOUNDPLAN		Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	3	3	0
R1	24.5	21.8	18.5	24.5	0.0
R2	60.0	57.2	54.0	60.0	0.0
R3	21.4	18.8	15.4	21.4	0.0
R4	12.1	10.9	6.1	12.1	0.0
R5	21.4	18.8	15.4	21.4	0.0
R6	24.0	21.3	18.0	24.0	0.0

Receptor	Project CNEL	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	Ambient (Leq)	Ambient + Project (Leq)
R1	21.8	59.8	59.8	0.0	24.5	56.3	56.3
R2	57.2	60.6	62.2	1.6	60.0	58.2	62.2
R3	18.8	60.2	60.2	0.0	21.4	56.7	56.7
R4	10.9	69.7	69.7	0.0	12.1	67.3	67.3
R5	18.8	59.6	59.6	0.0	21.4	58.8	58.8
R6	21.3	54.5	54.5	0.0	24.0	50.8	50.8

Bellwood
Source Levels in dB(A) - Mechanical

Name	Source type	Lw dB(A)	
Mechanical N1	Point	90.0	
Mechanical N2	Point	90.0	
Mechanical N3	Point	90.0	
Mechanical N4	Point	90.0	
Mechanical N5	Point	90.0	
Mechanical N6	Point	90.0	
Mechanical S1	Point	90.0	
Mechanical S2	Point	90.0	
Mechanical S3	Point	90.0	
Mechanical S4	Point	90.0	

Bellwood
Assessed contribution level - Mechanical

Source	Ld dB(A)
Receiver R1 Ld 53.9 dB(A)	
Mechanical N1	29.9
Mechanical N2	32.0
Mechanical N3	25.3
Mechanical N4	26.5
Mechanical N5	25.0
Mechanical N6	25.3
Mechanical S1	47.6
Mechanical S2	46.2
Mechanical S3	50.5
Mechanical S4	44.5
Receiver R2 Ld 41.8 dB(A)	
Mechanical N1	34.3
Mechanical N2	34.1
Mechanical N3	34.0
Mechanical N4	33.9
Mechanical N5	33.5
Mechanical N6	33.7
Mechanical S1	20.1
Mechanical S2	17.9
Mechanical S3	19.7
Mechanical S4	17.7
Receiver R3 Ld 36.4 dB(A)	
Mechanical N1	27.5
Mechanical N2	27.4
Mechanical N3	27.3
Mechanical N4	25.0
Mechanical N5	28.2
Mechanical N6	30.3
Mechanical S1	21.8
Mechanical S2	23.1
Mechanical S3	21.8
Mechanical S4	22.2
Receiver R4 Ld 38.3 dB(A)	
Mechanical N1	28.0
Mechanical N2	27.6
Mechanical N3	27.6
Mechanical N4	30.9
Mechanical N5	30.8
Mechanical N6	30.6

Bellwood
Assessed contribution level - Mechanical

Source	Ld dB(A)
Mechanical S1	24.9
Mechanical S2	25.6
Mechanical S3	24.5
Mechanical S4	25.7
Receiver R5 Ld 43.9 dB(A)	
Mechanical N1	17.1
Mechanical N2	16.4
Mechanical N3	17.1
Mechanical N4	17.4
Mechanical N5	17.3
Mechanical N6	16.9
Mechanical S1	35.5
Mechanical S2	35.3
Mechanical S3	39.4
Mechanical S4	39.4
Receiver R6 Ld 41.6 dB(A)	
Mechanical N1	17.2
Mechanical N2	16.3
Mechanical N3	17.0
Mechanical N4	17.9
Mechanical N5	16.9
Mechanical N6	16.5
Mechanical S1	34.5
Mechanical S2	33.9
Mechanical S3	36.2
Mechanical S4	36.7

Bellwood
Source Levels in dB(A) - People

Name	Source type	Lw dB(A)	
People Level 1 Bistro Terrace	Area	89.7	
People Level 1 Terrace (Center)	Area	91.4	
People Level 1 Terrace (MC)	Area	92.2	
People Level 2 Terrace (MC)	Area	89.9	
People Level 3 Terrace	Area	85.8	
People Level 4 Terrace (S)	Area	85.8	
People Level 4 Terrace (SW)	Area	85.8	
People Level 5 Terrace	Area	85.8	
People Level 6 Terrace 1	Area	83.6	
People Level 6 Terrace 2	Area	83.8	
People Level 6 Terrace 3	Area	85.8	
People Level 6 Terrace 4	Area	85.8	
People Level P1 Courtyard	Area	95.2	

Bellwood
Assessed contribution level - People

9

Source	Ld dB(A)
Receiver R1 Ld 58.1 dB(A)	
People Level P1 Courtyard	56.0
People Level 1 Terrace (MC)	29.7
People Level 1 Terrace (Center)	53.1
People Level 1 Bistro Terrace	22.5
People Level 2 Terrace (MC)	23.6
People Level 3 Terrace	29.4
People Level 4 Terrace (SW)	41.5
People Level 4 Terrace (S)	41.6
People Level 5 Terrace	34.9
People Level 6 Terrace 1	20.5
People Level 6 Terrace 2	31.2
People Level 6 Terrace 4	21.2
People Level 6 Terrace 3	37.8
Receiver R2 Ld 46.3 dB(A)	
People Level P1 Courtyard	26.7
People Level 1 Terrace (MC)	26.4
People Level 1 Terrace (Center)	26.3
People Level 1 Bistro Terrace	45.6
People Level 2 Terrace (MC)	35.9
People Level 3 Terrace	19.0
People Level 4 Terrace (SW)	11.3
People Level 4 Terrace (S)	14.5
People Level 5 Terrace	13.4
People Level 6 Terrace 1	11.3
People Level 6 Terrace 2	10.5
People Level 6 Terrace 4	31.5
People Level 6 Terrace 3	14.3
Receiver R3 Ld 27.6 dB(A)	
People Level P1 Courtyard	16.9
People Level 1 Terrace (MC)	11.8
People Level 1 Terrace (Center)	12.6
People Level 1 Bistro Terrace	14.6
People Level 2 Terrace (MC)	14.4
People Level 3 Terrace	6.3
People Level 4 Terrace (SW)	9.3
People Level 4 Terrace (S)	11.8
People Level 5 Terrace	11.7
People Level 6 Terrace 1	10.2
People Level 6 Terrace 2	8.2

Bellwood
Assessed contribution level - People

Source	Ld dB(A)	
People Level 6 Terrace 4	25.6	
People Level 6 Terrace 3	12.1	
Receiver R4 Ld 40.5 dB(A)		
People Level P1 Courtyard	21.6	
People Level 1 Terrace (MC)	14.6	
People Level 1 Terrace (Center)	22.9	
People Level 1 Bistro Terrace	39.2	
People Level 2 Terrace (MC)	13.1	
People Level 3 Terrace	13.1	
People Level 4 Terrace (SW)	18.9	
People Level 4 Terrace (S)	12.9	
People Level 5 Terrace	27.0	
People Level 6 Terrace 1	31.0	
People Level 6 Terrace 2	21.5	
People Level 6 Terrace 4	24.8	
People Level 6 Terrace 3	17.0	
Receiver R5 Ld 39.9 dB(A)		
People Level P1 Courtyard	26.3	
People Level 1 Terrace (MC)	16.5	
People Level 1 Terrace (Center)	22.5	
People Level 1 Bistro Terrace	24.4	
People Level 2 Terrace (MC)	12.9	
People Level 3 Terrace	12.4	
People Level 4 Terrace (SW)	30.4	
People Level 4 Terrace (S)	17.5	
People Level 5 Terrace	33.8	
People Level 6 Terrace 1	34.6	
People Level 6 Terrace 2	33.2	
People Level 6 Terrace 4	11.7	
People Level 6 Terrace 3	22.9	
Receiver R6 Ld 41.4 dB(A)		
People Level P1 Courtyard	30.9	
People Level 1 Terrace (MC)	19.8	
People Level 1 Terrace (Center)	28.0	
People Level 1 Bistro Terrace	26.1	
People Level 2 Terrace (MC)	16.3	
People Level 3 Terrace	14.5	
People Level 4 Terrace (SW)	27.0	
People Level 4 Terrace (S)	15.7	
People Level 5 Terrace	37.2	

Bellwood
Assessed contribution level - People

Source	Ld dB(A)	
People Level 6 Terrace 1	35.9	
People Level 6 Terrace 2	31.9	
People Level 6 Terrace 4	11.1	
People Level 6 Terrace 3	18.1	

Bellwood
Source Levels in dB(A) - speakers

Name	Source type	Lw dB(A)	
Speakers Level P1 Courtyard 1	Point	94.2	
Speakers Level P1 Courtyard 2	Point	94.2	
Speakers Level P1 Courtyard 3	Point	94.2	
Speakers Level P1 Courtyard 4	Point	94.2	
Speakers Level P1 Courtyard 5	Point	94.2	

Bellwood
Assessed contribution level - speakers

Source	Ld dB(A)
Receiver R1 Ld 50.4 dB(A)	
Speakers Level P1 Courtyard 1	43.7
Speakers Level P1 Courtyard 2	41.7
Speakers Level P1 Courtyard 3	42.4
Speakers Level P1 Courtyard 4	40.3
Speakers Level P1 Courtyard 5	46.4
Receiver R2 Ld 23.2 dB(A)	
Speakers Level P1 Courtyard 1	13.4
Speakers Level P1 Courtyard 2	11.9
Speakers Level P1 Courtyard 3	19.3
Speakers Level P1 Courtyard 4	17.4
Speakers Level P1 Courtyard 5	14.9
Receiver R3 Ld 4.9 dB(A)	
Speakers Level P1 Courtyard 1	-2.9
Speakers Level P1 Courtyard 2	-2.6
Speakers Level P1 Courtyard 3	-3.7
Speakers Level P1 Courtyard 4	-3.5
Speakers Level P1 Courtyard 5	0.6
Receiver R4 Ld 20.2 dB(A)	
Speakers Level P1 Courtyard 1	9.1
Speakers Level P1 Courtyard 2	8.5
Speakers Level P1 Courtyard 3	17.8
Speakers Level P1 Courtyard 4	13.3
Speakers Level P1 Courtyard 5	9.3
Receiver R5 Ld 28.5 dB(A)	
Speakers Level P1 Courtyard 1	20.1
Speakers Level P1 Courtyard 2	23.4
Speakers Level P1 Courtyard 3	23.9
Speakers Level P1 Courtyard 4	18.6
Speakers Level P1 Courtyard 5	18.1
Receiver R6 Ld 32.3 dB(A)	
Speakers Level P1 Courtyard 1	23.4
Speakers Level P1 Courtyard 2	27.5
Speakers Level P1 Courtyard 3	27.3
Speakers Level P1 Courtyard 4	23.8
Speakers Level P1 Courtyard 5	21.3

Bellwood
Source Levels in dB(A) - Loading

Name	Source type	Lw dB(A)	
Loading	Point	100.6	
Trash Compactor (inside)	Point	77.7	

Bellwood
Assessed contribution level - Loading

Source	Ld dB(A)
Receiver R1 Ld 24.5 dB(A)	
Loading	24.5
Trash Compactor (inside)	3.1
Receiver R2 Ld 60.0 dB(A)	
Loading	59.9
Trash Compactor (inside)	43.4
Receiver R3 Ld 21.4 dB(A)	
Loading	21.4
Trash Compactor (inside)	-1.5
Receiver R4 Ld 12.1 dB(A)	
Loading	12.0
Trash Compactor (inside)	-4.4
Receiver R5 Ld 21.4 dB(A)	
Loading	21.4
Trash Compactor (inside)	-7.6
Receiver R6 Ld 24.0 dB(A)	
Loading	24.0
Trash Compactor (inside)	-5.2

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Off-Site Traffic Noise Calculations

Project: Bellwood Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

EXISTING CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Beverly Glen Boulevard										
- Between Santa Monica Blvd. and Olympic Blvd.	60	10	40	35	2,166	21,660	10%	0	0	72.2
- Between Olympic Blvd. and Pico Blvd.	60	10	40	35	1,762	17,620	10%	0	0	71.3
Century Park West										
- Between Santa Monica Blvd. and Olympic Blvd.	70	10	45	35	1,242	12,420	10%	0	0	69.3
Avenue of the Stars										
- Between Santa Monica Blvd. and Olympic Blvd.	100	10	60	35	2,108	21,080	10%	0	0	70.3
Motor Avenue										
- Between Pico Blvd. and Cresta Dr.	50	10	35	35	1,749	17,490	10%	0	0	71.9
Kenwood Avenue										
- Between Olympic Blvd. and Pico Blvd.	30	10	25	25	274	2,740	10%	0	0	65.4
Santa Monica Boulevard										
- Between Beverly Glen Blvd. and Century Park W	80	30	70	35	4,569	45,690	10%	0	0	73.1
- Between Century Park West and Avenue of the	80	30	70	35	4,361	43,610	10%	0	0	72.9
Olympic Boulevard										
- Between Overland Ave. and Beverly Glen Blvd.	70	10	45	35	4,783	47,830	10%	0	0	75.2
- Between Beverly Glen Blvd. and Century Park W	80	10	50	35	4,686	46,860	10%	0	0	74.6
- Between Century Park West and Avenue of the	80	10	50	35	4,522	45,220	10%	0	0	74.4
Pico Boulevard										
- Between Overland Ave. and Beverly Glen Blvd.	70	10	45	35	3,706	37,060	10%	0	0	74.0
- Between Beverly Glen Blvd. and Motor Ave.	70	10	45	35	3,338	33,380	10%	0	0	73.6

* Estimated based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

Date Printed: 1/21/2021

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Off-Site Traffic Noise Calculations

Project: Bellwood Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

EXISTING + PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Beverly Glen Boulevard										
- Between Santa Monica Blvd. and Olympic Blvd.	60	10	40	35	2,165	21,650	10%	0	0	72.2
- Between Olympic Blvd. and Pico Blvd.	60	10	40	35	1,760	17,600	10%	0	0	71.3
Century Park West										
- Between Santa Monica Blvd. and Olympic Blvd.	70	10	45	35	1,240	12,400	10%	0	0	69.3
Avenue of the Stars										
- Between Santa Monica Blvd. and Olympic Blvd.	100	10	60	35	2,108	21,080	10%	0	0	70.3
Motor Avenue										
- Between Pico Blvd. and Cresta Dr.	50	10	35	35	1,749	17,490	10%	0	0	71.9
Kenwood Avenue										
- Between Olympic Blvd. and Pico Blvd.	30	10	25	25	275	2,750	10%	0	0	65.4
Santa Monica Boulevard										
- Between Beverly Glen Blvd. and Century Park W	80	30	70	35	4,569	45,690	10%	0	0	73.1
- Between Century Park West and Avenue of the	80	30	70	35	4,359	43,590	10%	0	0	72.8
Olympic Boulevard										
- Between Overland Ave. and Beverly Glen Blvd.	70	10	45	35	4,780	47,800	10%	0	0	75.1
- Between Beverly Glen Blvd. and Century Park W	80	10	50	35	4,678	46,780	10%	0	0	74.6
- Between Century Park West and Avenue of the	80	10	50	35	4,516	45,160	10%	0	0	74.4
Pico Boulevard										
- Between Overland Ave. and Beverly Glen Blvd.	70	10	45	35	3,704	37,040	10%	0	0	74.0
- Between Beverly Glen Blvd. and Motor Ave.	70	10	45	35	3,338	33,380	10%	0	0	73.6

* Estimated based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

Date Printed: 1/21/2021

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations

Project: Bellwood Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

FUTURE NO PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Beverly Glen Boulevard										
- Between Santa Monica Blvd. and Olympic Blvd.	60	10	40	35	2,275	22,750	10%	0	0	72.4
- Between Olympic Blvd. and Pico Blvd.	60	10	40	35	1,840	18,400	10%	0	0	71.5
Century Park West										
- Between Santa Monica Blvd. and Olympic Blvd.	70	10	45	35	1,305	13,050	10%	0	0	69.5
Avenue of the Stars										
- Between Santa Monica Blvd. and Olympic Blvd.	100	10	60	35	2,833	28,330	10%	0	0	71.6
Motor Avenue										
- Between Pico Blvd. and Cresta Dr.	50	10	35	35	2,000	20,000	10%	0	0	72.5
Kenwood Avenue										
- Between Olympic Blvd. and Pico Blvd.	30	10	25	25	285	2,850	10%	0	0	65.6
Santa Monica Boulevard										
- Between Beverly Glen Blvd. and Century Park W	80	30	70	35	5,221	52,210	10%	0	0	73.6
- Between Century Park West and Avenue of the	80	30	70	35	4,973	49,730	10%	0	0	73.4
Olympic Boulevard										
- Between Overland Ave. and Beverly Glen Blvd.	70	10	45	35	5,080	50,800	10%	0	0	75.4
- Between Beverly Glen Blvd. and Century Park W	80	10	50	35	4,968	49,680	10%	0	0	74.8
- Between Century Park West and Avenue of the	80	10	50	35	4,790	47,900	10%	0	0	74.7
Pico Boulevard										
- Between Overland Ave. and Beverly Glen Blvd.	70	10	45	35	4,186	41,860	10%	0	0	74.6
- Between Beverly Glen Blvd. and Motor Ave.	70	10	45	35	3,784	37,840	10%	0	0	74.1

* Estimated based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

Date Printed: 1/21/2021

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations

Project: Bellwood Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

FUTURE + PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Beverly Glen Boulevard										
- Between Santa Monica Blvd. and Olympic Blvd.	60	10	40	35	2,273	22,730	10%	0	0	72.4
- Between Olympic Blvd. and Pico Blvd.	60	10	40	35	1,838	18,380	10%	0	0	71.5
Century Park West										
- Between Santa Monica Blvd. and Olympic Blvd.	70	10	45	35	1,303	13,030	10%	0	0	69.5
Avenue of the Stars										
- Between Santa Monica Blvd. and Olympic Blvd.	100	10	60	35	2,833	28,330	10%	0	0	71.6
Motor Avenue										
- Between Pico Blvd. and Cresta Dr.	50	10	35	35	2,000	20,000	10%	0	0	72.5
Kenwood Avenue										
- Between Olympic Blvd. and Pico Blvd.	30	10	25	25	286	2,860	10%	0	0	65.6
Santa Monica Boulevard										
- Between Beverly Glen Blvd. and Century Park W	80	30	70	35	5,221	52,210	10%	0	0	73.6
- Between Century Park West and Avenue of the	80	30	70	35	4,972	49,720	10%	0	0	73.4
Olympic Boulevard										
- Between Overland Ave. and Beverly Glen Blvd.	70	10	45	35	5,077	50,770	10%	0	0	75.4
- Between Beverly Glen Blvd. and Century Park W	80	10	50	35	4,960	49,600	10%	0	0	74.8
- Between Century Park West and Avenue of the	80	10	50	35	4,784	47,840	10%	0	0	74.7
Pico Boulevard										
- Between Overland Ave. and Beverly Glen Blvd.	70	10	45	35	4,184	41,840	10%	0	0	74.6
- Between Beverly Glen Blvd. and Motor Ave.	70	10	45	35	3,784	37,840	10%	0	0	74.1

* Estimated based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

Date Printed: 1/21/2021

Project Alternatives Calculations

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Site Prep/ Demolition***
Alternatives Analysis (50% Reduction)

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	10	0
Tractors/Loaders/Backhoes		84	40%		
Water Truck	1	82	10%	50	0
Rubber Tired Loaders		79	40%		
Rubber Tired Dozers	1	82	40%	75	0
Concrete/Industrial Saw		90	20%		
Tractors/Loaders/Backhoes	1	84	40%	100	0
Rubber Tired Loaders		79	40%		
Rubber Tired Dozers	1	82	40%	125	0
Air Compressor		78	40%		
	5				

Receptor: ***R1***

Results:

1-hour Leq: 97.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Site Prep/ Demolition***
Alternatives Analysis (50% Reduction)

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	10	0
Tractors/Loaders/Backhoes		84	40%		
Water Truck	1	82	10%	50	0
Rubber Tired Loaders		79	40%		
Rubber Tired Dozers	1	82	40%	75	0
Concrete/Industrial Saw		90	20%		
Tractors/Loaders/Backhoes	1	84	40%	100	0
Rubber Tired Loaders		79	40%		
Rubber Tired Dozers	1	82	40%	125	0
Air Compressor		78	40%		
	5				

Receptor: ***R2***

Results:

1-hour Leq: 97.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Site Prep/ Demolition***
Alternatives Analysis (50% Reduction)

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	425	0
Tractors/Loaders/Backhoes		84	40%		
Water Truck	1	82	10%	445	0
Rubber Tired Loaders		79	40%		
Rubber Tired Dozers	1	82	40%	465	0
Concrete/Industrial Saw		90	20%		
Tractors/Loaders/Backhoes	1	84	40%	485	0
Rubber Tired Loaders		79	40%		
Rubber Tired Dozers	1	82	40%	505	0
Air Compressor		78	40%		
	5				

Receptor: ***R3***

Results:

1-hour Leq: 67.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Site Prep/ Demolition***
Alternatives Analysis (50% Reduction)

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	315	0
Tractors/Loaders/Backhoes		84	40%		
Water Truck	1	82	10%	335	0
Rubber Tired Loaders		79	40%		
Rubber Tired Dozers	1	82	40%	355	0
Concrete/Industrial Saw		90	20%		
Tractors/Loaders/Backhoes	1	84	40%	375	0
Rubber Tired Loaders		79	40%		
Rubber Tired Dozers	1	82	40%	395	0
Air Compressor		78	40%		
	5				

Receptor: ***R4***

Results:

1-hour Leq: 69.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Site Prep/ Demolition***
Alternatives Analysis (50% Reduction)

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	155	10
Tractors/Loaders/Backhoes		84	40%		
Water Truck	1	82	10%	180	10
Rubber Tired Loaders		79	40%		
Rubber Tired Dozers	1	82	40%	205	10
Concrete/Industrial Saw		90	20%		
Tractors/Loaders/Backhoes	1	84	40%	100	10
Rubber Tired Loaders		79	40%		
Rubber Tired Dozers	1	82	40%	125	10
Air Compressor		78	40%		
	5				

Receptor: ***R5***

Results:

1-hour Leq: 67.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Site Prep/ Demolition***
Alternatives Analysis (50% Reduction)

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete/Industrial Saw	1	90	20%	10	0
Tractors/Loaders/Backhoes		84	40%		
Water Truck	1	82	10%	50	0
Rubber Tired Loaders		79	40%		
Rubber Tired Dozers	1	82	40%	75	0
Concrete/Industrial Saw		90	20%		
Tractors/Loaders/Backhoes	1	84	40%	100	0
Rubber Tired Loaders		79	40%		
Rubber Tired Dozers	1	82	40%	125	0
Air Compressor		78	40%		
	5				

Receptor: ***R6***

Results:

1-hour Leq: 97.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Grading/Excavation***
Alternatives Analysis (Central Location Development)

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	30	0
Tractors/Loaders/Backhoes	1	84	40%	30	0
Water Truck	1	82	10%	55	0
Excavator	1	81	40%	55	0
Rubber Tired Loaders	1	79	40%	80	0
Rubber Tired Dozers	1	82	40%	80	0
Forklift	1	75	20%	100	0
Welders	1	74	40%	100	0
Excavator	1	81	40%	125	0
	9				

Receptor: ***R1***

Results:

1-hour Leq: 87.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Grading/Excavation***
Alternatives Analysis (Central Location Development)

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	30	0
Tractors/Loaders/Backhoes	1	84	40%	30	0
Water Truck	1	82	10%	55	0
Excavator	1	81	40%	55	0
Rubber Tired Loaders	1	79	40%	80	0
Rubber Tired Dozers	1	82	40%	80	0
Forklift	1	75	20%	100	0
Welders	1	74	40%	100	0
Excavator	1	81	40%	125	0
	9				

Receptor: ***R2***

Results:

1-hour Leq: 87.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Grading/Excavation***
Alternatives Analysis (Central Location Development)

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	445	0
Tractors/Loaders/Backhoes	1	84	40%	445	0
Water Truck	1	82	10%	465	0
Excavator	1	81	40%	465	0
Rubber Tired Loaders	1	79	40%	485	0
Rubber Tired Dozers	1	82	40%	485	0
Forklift	1	75	20%	505	0
Welders	1	74	40%	505	0
Excavator	1	81	40%	525	0
	9				

Receptor: ***R3***

Results:

1-hour Leq: 66.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Grading/Excavation***
Alternatives Analysis (Central Location Development)

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	335	0
Tractors/Loaders/Backhoes	1	84	40%	335	0
Water Truck	1	82	10%	355	0
Excavator	1	81	40%	355	0
Rubber Tired Loaders	1	79	40%	375	0
Rubber Tired Dozers	1	82	40%	375	0
Forklift	1	75	20%	395	0
Welders	1	74	40%	395	0
Excavator	1	81	40%	415	0
	9				

Receptor: ***R4***

Results:

1-hour Leq: 68.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Grading/Excavation***
Alternatives Analysis (Central Location Development)

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	175	10
Tractors/Loaders/Backhoes	1	84	40%	175	10
Water Truck	1	82	10%	195	10
Excavator	1	81	40%	195	10
Rubber Tired Loaders	1	79	40%	215	10
Rubber Tired Dozers	1	82	40%	215	10
Forklift	1	75	20%	235	10
Welders	1	74	40%	235	10
Excavator	1	81	40%	255	10
	9				

Receptor: ***R5***

Results:

1-hour Leq: 63.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Bellwood Project

Construction Phase: ***Grading/Excavation***
Alternatives Analysis (Central Location Development)

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	30	0
Tractors/Loaders/Backhoes	1	84	40%	30	0
Water Truck	1	82	10%	55	0
Excavator	1	81	40%	55	0
Rubber Tired Loaders	1	79	40%	80	0
Rubber Tired Dozers	1	82	40%	80	0
Forklift	1	75	20%	100	0
Welders	1	74	40%	100	0
Excavator	1	81	40%	125	0
	9				

Receptor: ***R6***

Results:

1-hour Leq: 87.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

Bellwood Project
Off-Site Traffic - Alternatives Analysis

Olympic Boulevard (between Beverly Glen and Century Park West)

Scenario	Project	Alternative 2	Alternative 3
Existing, ADT	46860		
Existing SPL, dBA CNEL	74.6		
Existing With Project, ADT	46780		
EWP SPL, dBA CNEL	74.6		
% Increased	0.998		
Noise increase, dBA	0.0		
Project Trips, ADT	-75	638	-116
% to roadway		100%	100%
Project Alt, ADT (roadway)		638	-116
Existing With Project Alt, ADT		47498	46744
% Increased		*1.4%*	*-0.2%*
Noise increase, dBA		*0.1*	*0.0*
Increased Relative to Project		*0.1*	*0.0*

Kenwood Avenue (between Olympic Blvd. and Cresta Dr.)

Scenario	Project	Alternative 2	Alternative 3
Existing, ADT	2740		
Existing SPL, dBA CNEL	65.4		
Existing With Project, ADT	2750		
EWP SPL, dBA CNEL	65.4		
% Increased	1.004		
Noise increase, dBA	0.0		
Project Trips, ADT	-75	638	-116
% to roadway		5%	5%
Project Alt, ADT (roadway)		32	-6
Existing With Project Alt, ADT		2772	2734
% Increased		*1.2%*	*-0.2%*
Noise increase, dBA		*0.1*	*0.0*
Increased Relative to Project		*0.1*	*0.0*

Appendix G

Public Service Provider Response Letters

Appendix G.1

Los Angeles Fire Department Letter

FORM. GEN. 160 (Rev. 6-80)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

July 12, 2019

To: Vincent Bertoni, AICP, Director of Planning
Department of City Planning
Attention: Adam Villani

From: Fire Department

Subject: Notice of Preparation of an Environmental Impact

CASE NO.: **ENV-2018-7182-EIR**
PROJECT NAME: **SENIOR RESIENTIAL COMMUNITY AT THE BELLWOOD**
PROJECT APPLICANT: **SBLP CENTURY CITY. LLC**
PROJECT LOCATION: **10328-10384 AND 10341-10381 BELLWOOD AVENUE, LOS ANGELES, CA 90064**

PROJECT DESCRIPTION:

The Project proposes the development of a new eldercare facility for persons 62 years of age and older on a 2.22-acre (96,792 square feet) site located at 10328-10384 and 10341-10381 Bellwood Avenue (Project Site) in the West Los Angeles Community Plan area of the City of Los Angeles (City). The Project Site includes the portion of Bellwood Avenue that bifurcates the Project Site. The Project would include 192 senior housing residential units, comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms; 50,463 square feet of indoor common areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area; and 14,630 square feet of outdoor common areas, including several courtyards and terraces that would be distributed throughout the Project Site. The proposed uses would be located within a single building ranging in height from 38 feet to 70 feet, or three to six stories. A total of 140 vehicle parking spaces would be provided within two subterranean levels beneath the proposed building. Three existing multi-family residential developments with a total of 112 residential units would be removed to accommodate the Project. Additionally, the Project includes the vacation and realignment of the portion of Bellwood Avenue that currently bifurcates the Project Site. The Project would comprise 241,754 square feet of floor area with a floor area ratio (FAR) of 2.66:1.; and would require the export of approximately 74,800 cubic yards of soil.

The following comments are furnished in response to your request for this Department to review the proposed development:

FIRE FLOW:

The adequacy of fire protection for a given area is based on required fire-flow, response distance from existing fire stations, and this Department's judgment for needs in the area. In general, the required fire-flow is closely related to land use. The quantity of water necessary for fire protection varies with the type of development, life hazard, occupancy, and the degree of fire hazard.

Fire-flow requirements vary from 2,000 gallons per minute (G.P.M.) in low density residential areas to 12,000 G.P.M. in high-density commercial or industrial areas. A minimum residual water pressure of 20 pounds per square inch (P.S.I.) is to remain in the water system, with the required gallons per minute flowing. The required fire-flow for this project has been set at **6,000 to 9,000 G.P.M. from four to six fire hydrants flowing simultaneously.**

Improvements to the water system in this area may be required to provide 6,000 to 9,000 G.P.M. fire-flow. The cost of improving the water system may be charged to the developer. For more detailed information regarding water main improvements, the developer shall contact the Water Services Section of the Department of Water and Power.

RESPONSE DISTANCE:

Based on a required fire-flow of 6,000 to 9,000 G.P.M., the first-due Engine Company should be within 1 mile(s), the first-due Truck Company within 1 ½ mile(s).

FIRE STATIONS:

The Fire Department has existing fire stations at the following locations for initial response into the area of the proposed development: **10328-10384 AND 10341-10381 BELLWOOD AVENUE**

DISTANCE		SERVICES & EQUIPMENT	STAFF
0.8	**Fire Station No. 92** 10556 W. Pico Boulevard Los Angeles, CA 90064	Task Force, Paramedic Rescue Ambulance and BLS Rescue Ambulance	**12**
1.9	**Fire Station No. 59** 11505 W. Olympic Blvd. Los Angeles, CA 90064	Assessment Engine, Paramedic Rescue Ambulance. EMS Battalion Captain and Rehab Air Tender	**6**
2.6	**Fire Station No. 43** 3690 S. Motor Avenue Los Angeles, CA 90034	Engine and Paramedic Rescue Ambulance	**6**
2.7	**Fire Station No. 58** 1556 S. Robertson Blvd. Los Angeles, CA 90035	Assessment Engine, Paramedic Rescue Ambulance and BLS Rescue Ambulance	**8**
2.8	**Fire Station No. 37** 1090 Veteran Avenue Los Angeles, CA 90024	Task Force and Paramedic Rescue Ambulance	**14**

Based on these criteria (response distance from existing fire stations), fire protection would be considered **adequate.**

FIREFIGHTING PERSONNEL & APPARATUS ACCESS:

Access for Fire Department apparatus and personnel to and into all structures shall be required.

One or more Knox Boxes will be required to be installed for LAFD access to project. location and number to be determined by LAFD Field Inspector. (Refer to FPB Req # 75).

505.1 Address identification. New and existing buildings shall have approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property.

The entrance to a Residential lobby must be within 50 feet of the desired street address curb face.

Where above ground floors are used for residential purposes, the access requirement shall be interpreted as being the horizontal travel distance from the street, driveway, alley, or designated fire lane to the main entrance of individual units.

The entrance or exit of all ground dwelling units shall not be more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane.

No building or portion of a building shall be constructed more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane.

The Fire Department may require additional vehicular access where buildings exceed 28 feet in height.

2014 CITY OF LOS ANGELES FIRE CODE, SECTION 503.1.4 (EXCEPTION)

a. When this exception is applied to a fully fire sprinklered residential building equipped with a wet standpipe outlet inside an exit stairway with at least a 2 hour rating the distance from the wet standpipe outlet in the stairway to the entry door of any dwelling unit or guest room shall not exceed 150 feet of horizontal travel AND the distance from the edge of the roadway of an improved street or approved fire lane to the door into the same exit stairway directly from outside the building shall not exceed 150 feet of horizontal travel.

b. It is the intent of this policy that in no case will the maximum travel distance exceed 150 feet inside the structure and 150 feet outside the structure. The term “horizontal travel” refers to the actual path of travel to be taken by a person responding to an emergency in the building.

c. This policy does not apply to single-family dwellings or to non-residential buildings.

Building designs for multi-storied residential buildings shall incorporate at least one access stairwell off the main lobby of the building; But, in no case greater than 150ft horizontal travel distance from the edge of the public street, private street or Fire Lane. This stairwell shall extend onto the roof.

Entrance to the main lobby shall be located off the address side of the building.

Any required Fire Annunciator panel or Fire Control Room shall be located within 20ft visual line of site of the main entrance stairwell or to the satisfaction of the Fire Department.

Where rescue window access is required, provide conditions and improvements necessary to meet accessibility standards as determined by the Los Angeles Fire Department.

Fire lane width shall not be less than 20 feet. When a fire lane must accommodate the operation of Fire Department aerial ladder apparatus or where fire hydrants are installed, those portions shall not be less than 28 feet in width.

The width of private roadways for general access use and fire lanes shall not be less than feet, and the fire lane must be clear to the sky.

Fire lanes, where required and dead ending streets shall terminate in a cul-de-sac or other approved turning area. No dead ending street or fire lane shall be greater than 700 feet in length or secondary access shall be required.

Submit plot plans indicating access road and turning area for Fire Department approval.

Adequate off-site public and on-site private fire hydrants may be required. Their number and location to be determined after the Fire Department's review of the plot plan.

The Fire Department may require additional roof access via parapet access roof ladders where buildings exceed 28 feet in height, and when overhead wires or other obstructions block aerial ladder access.

All parking restrictions for fire lanes shall be posted and/or painted prior to any Temporary Certificate of Occupancy being issued.

Plans showing areas to be posted and/or painted, “FIRE LANE NO PARKING” shall be submitted and approved by the Fire Department prior to building permit application sign-off.

Electric Gates approved by the Fire Department shall be tested by the Fire Department prior to Building and Safety granting a Certificate of Occupancy.

All public street and fire lane cul-de-sacs shall have the curbs painted red and/or be posted "No Parking at Any Time" prior to the issuance of a Certificate of Occupancy or Temporary Certificate of Occupancy for any structures adjacent to the cul-de-sac.

5101.1 Emergency responder radio coverage in new buildings. All new buildings shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems.

City of Los Angeles Fire Department Hydrants and Access design requirements for the Outdoor and indoor use of dependent access (attended parking) Mechanical Car Stackers – 2, 3 & 4 by levels high. The provisions of this document shall regulate the use of Mechanical Car Stackers by addressing the arrangement, location and size of areas, height, separations, housekeeping and fire protection.

Recently, the Los Angeles Fire Department (LAFD) modified Fire Prevention Bureau (FPB) Requirement 10. Helicopter landing facilities are still required on all High-Rise buildings in the City. However, FPB's Requirement 10 has been revised to provide two new alternatives to a full FAA-approved helicopter landing facilities.

Each standpipe in a new high-rise building shall be provided with two remotely located FDC's for each zone in compliance with NFPA 14-2013, Section 7.12.2.

During demolition, the Fire Department access will remain clear and unobstructed.

That in order to provide assurance that the proposed common fire lane and fire protection facilities, for the project, not maintained by the City, are properly and adequately maintained, the sub-divider shall record with the County Recorder, prior to the recordation of the final map, a covenant and agreement (Planning Department General Form CP-6770) to assure the following:

A. The establishment of a property owners association, which shall cause a yearly inspection to be, made by a registered civil engineer of all common fire lanes and fire protection facilities. The association will undertake any necessary maintenance and corrective measures. Each future property owner shall automatically become a member of the association or organization required above and is automatically subject to a proportionate share of the cost.

B. The future owners of affected lots with common fire lanes and fire protection facilities shall be informed or their responsibility for the maintenance of the devices on their lots. The future owner and all successors will be presented with a copy of the maintenance program for their lot. Any amendment or modification that would defeat the obligation of said association as the Advisory Agency must approve required hereinabove in writing after consultation with the Fire Department.

C. In the event that the property owners association fails to maintain the common property and easements as required by the CC and R's, the individual property owners shall be responsible for their proportional share of the maintenance.

D. Prior to any building permits being issued, the applicant shall improve, to the satisfaction of the Fire Department, all common fire lanes and install all private fire hydrants to be required.

E. That the Common Fire Lanes and Fire Protection facilities be shown on the Final Map.

The plot plans shall be approved by the Fire Department showing fire hydrants and access for each phase of the project prior to the recording of the final map for that phase. Each phase shall comply independently with code requirements.

The Los Angeles Fire Department continually evaluates fire station placement and overall Department services for the entire City, as well as specific areas. The development of this proposed project, along with other approved and planned projects in the immediate area, may result in the need for the following:

1. Increased staffing for existing facilities. (I.E., Paramedic Rescue Ambulance and EMT Rescue Ambulance resources.)
2. Additional fire protection facilities.
3. Relocation of present fire protection facilities.

For additional information, please contact the Fire Development Services Section, Hydrants & Access Unit at **(213) 482-6543.**

RALPH M. TERRAZAS,
Fire Chief

Kristin Crowley, Fire Marshal
Bureau of Fire Prevention and Public Safety

KC:JDC:yw

Appendix G.2

Los Angeles Police Department Letter

LOS ANGELES POLICE DEPARTMENT

MICHEL R. MOORE
Chief of Police

ERIC GARCETTI
Mayor

P. O. Box 30158
Los Angeles, CA 90030
Telephone: (213) 486-6000
TDD: (877) 275-5273
Ref #:14.7

RECEIVED
CITY OF LOS ANGELES
AUG 28 2019
MAJOR PROJECTS
UNIT

July 29, 2019

Mr. Adam Villani
City Planner
Department of City Planning
221 North Figueroa Street
Los Angeles, California 90012

Dear Mr. Villani:

The proposed Senior Residential Community at the Bellwood Project falls within the geographical boundaries of the Los Angeles Police Department's West Los Angeles Area. A project of this size could have a minor impact on police services in the West Los Angeles Area. The Department is available to advise you on crime prevention features appropriate for the design of the property in this project. The Department strongly recommends that the developers contact Community Outreach and Development Division, Crime Prevention Through Environmental Design, Officer Christopher Gibson, at (213) 486-6000.

Upon completion of the project, you are encouraged to provide the West Los Angeles Area Commanding Officer with a diagram of each portion of the property. The diagram should include access routes and any additional information that might facilitate police response.

Should you have any questions, please contact Officer Christopher Gibson, Community Outreach and Development Division, at (213) 486-6000.

Respectfully,

MICHEL R. MOORE
Chief of Police

Aaron Ponce

AARON C. PONCE, Captain
Commanding Officer
Community Outreach and Development Division

Enclosure

The proposed Senior Residential Community at the Bellwood Project will be under the jurisdiction of West Los Angeles Community Police Station, located at 1663 Butler Avenue, Los Angeles, CA 90025. Telephone Number (310) 444-0701.

The project site is approximately 2.6 miles and 8 minutes without traffic from the Police Station in Reporting District (RD) 0847.

West Los Angeles Geographic Area is approximately 65.14 square miles and consists of 67 Reporting Districts. The service boundaries for West Los Angeles Area are as follows: Mulholland Drive to the North, Santa Monica Freeway, Washington Boulevard to the South, San Diego Freeway, La Cienega Boulevard, City of Los Angeles Boundary to the East, and the Pacific Ocean to the West.

It has approximately 260 sworn personnel and 28 civilian support staff assigned. It is a culturally diverse community with a population of approximately 228,000 people. The officer to resident ratio is; 1 officer to 876 residents in West Los Angeles Area. Additionally, there are special service teams available within the LAPD to service West Los Angeles Area.

West Los Angeles Station's emergency response system is directly linked to the Los Angeles Police Department Communications Division's Dispatch Centers. Communications Division has the responsibility to staff and answer, on a 24-hour basis, the telephones upon which calls for service are received. This includes 911 emergency calls (police, fire, and paramedic). Communication Division handles only police related calls for the City.

The average response time to emergency calls for service in West Los Angeles Area during 2018 was 6.2 minutes. The average response time for non-emergency calls for service in West Los Angeles Area during 2018 was 41.4 minutes.

Crime Statistics for all West Los Angeles Area:

CRIMES	YTD 2018	YTD 2017	YDT 2016
HOMICIDE	2	2	1
RAPE	32	57	43
ROBBERY	284	221	206
AGGRAVATED ASSAULT	296	220	254
BURGLARY	1414	1172	998
MOTOR VEHICLE TEFT	476	494	478
BURGLARTY FROM MOTOR VEHICLE	1712	1598	1631
PERSONAL/OTHER THEFT	1767	1638	1804

Prepared by:

Officer Christopher Gibson
Community Outreach and Development Division
213 486-6000

Appendix H

Transportation

Appendix H.1

Transportation Assessment

TRANSPORTATION ASSESSMENT FOR THE SENIOR RESIDENTIAL COMMUNITY AT THE BELLWOOD PROJECT

LOS ANGELES, CALIFORNIA

FEBRUARY 2021
REVISED APRIL 2021

PREPARED FOR

SBLP CENTURY CITY, LLC

PREPARED BY

Gibson
transportation consulting, inc.

TRANSPORTATION ASSESSMENT FOR THE SENIOR RESIDENTIAL COMMUNITY AT THE BELLWOOD PROJECT

LOS ANGELES, CALIFORNIA

February 2021
Revised April 2021

Prepared for:

SBLP CENTURY CITY, LLC

Prepared by:

GIBSON TRANSPORTATION CONSULTING, INC.
555 W. 5th Street, Suite 3375
Los Angeles, California 90013
(213) 683-0088

Ref: J1661

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Chapter 1
Introduction

This study presents the transportation assessment for the proposed eldercare facility project (Project) located at 10328-10384 and 10341-10381 Bellwood Avenue (Project Site) in the *West Los Angeles Transportation Improvement and Mitigation Specific Plan* (Los Angeles Department of City Planning [LADCP], 1997) area of the City of Los Angeles, California (City). The methodology and base assumptions used in the analysis were established in conjunction with the Los Angeles Department of Transportation (LADOT).

PROJECT DESCRIPTION

The Project proposes the development of a 192-unit eldercare facility consisting of 71 independent living units, 75 assisted living units, and 46 memory care units, as well as 50,463 square feet (sf) of ancillary general common areas and amenities for residents. It would replace 112 existing multi-family residential units currently on-site. Up to 140 parking spaces for the Project would be provided within two subterranean parking levels. Access to the Project site would be provided via one full-access driveway on Bellwood Avenue. Additionally, the portion of Bellwood Avenue that currently bifurcates the Project Site would be vacated and realigned as a private street[1], with through public access maintained from both sides of Bellwood Avenue.

The Project is anticipated to be completed in Year 2023. The conceptual Project Site plan is illustrated in Figure 1.

[1] The reconfigured Bellwood Avenue is currently proposed to become a private street; however, in the event Bellwood Avenue remains a public street, the Project would still implement the proposed vacation and realignment and through public access would also be maintained.

PROJECT LOCATION

As shown in Figure 2A, the Project Site is located in West Los Angeles within City Council District 5 and is approximately 2.2 acres comprised of nine contiguous lots on the south side of Bellwood Avenue, which are assigned APN 4315-018-029 to -037, and four contiguous lots on the north side of Bellwood Avenue, which are assigned APN 4315-018-048, in the Los Angeles County Assessor's records. The Project Site includes parcels located generally north/west and east/south of Bellwood Avenue, as well as the portion of Bellwood Avenue that bifurcates the Project Site. The portion of the Project Site located north/west of Bellwood Avenue is generally bounded by hotel uses to the north, Bellwood Avenue and multi-family residential uses to the east and south, and commercial uses to the west. The portion of the Project Site located east/south of Bellwood Avenue is generally bounded by hotel uses and Bellwood Avenue to the north, single-family residential uses to the east and south, and commercial uses to the west.

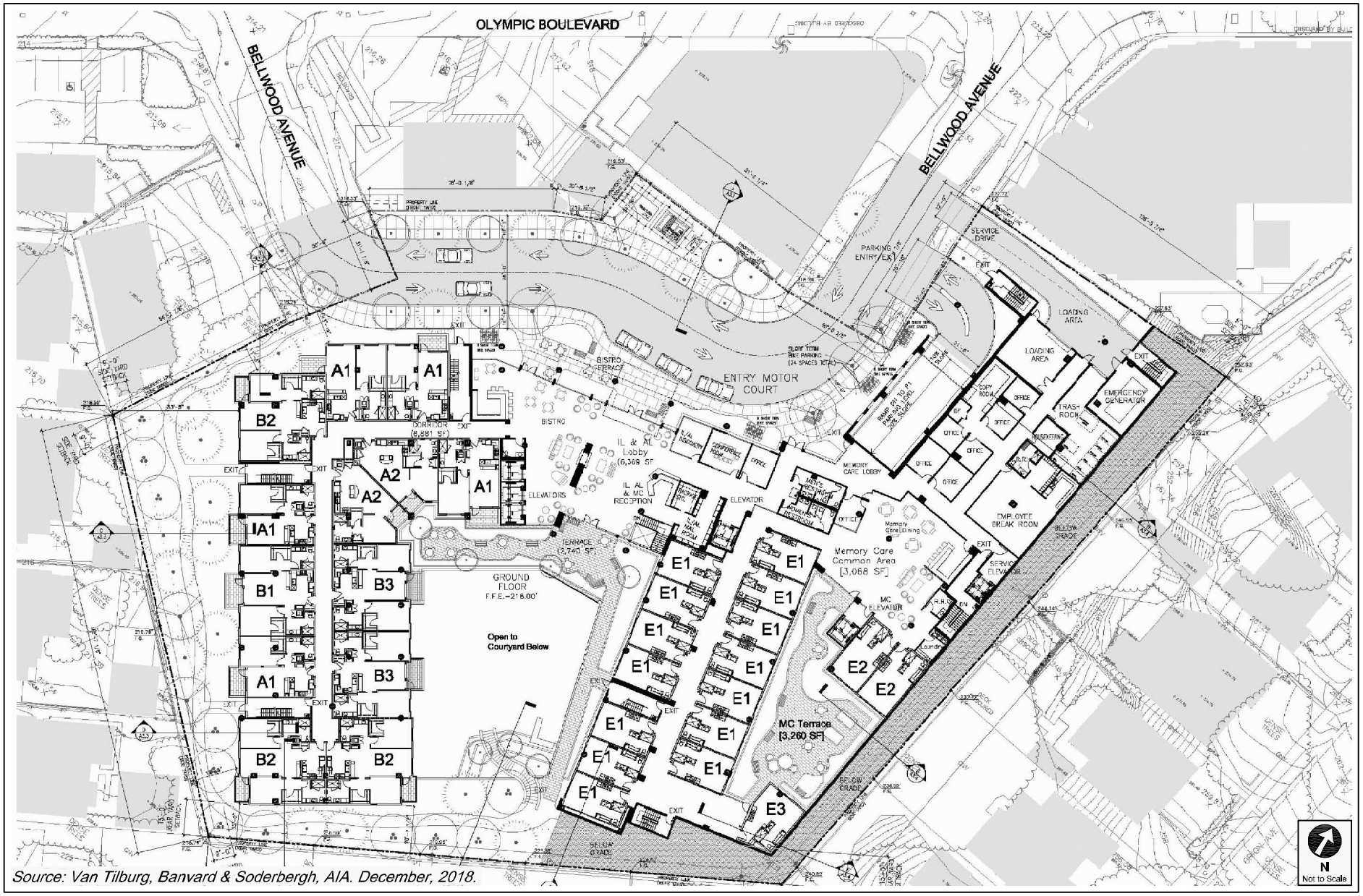
The Project Site is located approximately 1.50 miles east of the San Diego Freeway (I-405) and approximately 1.80 miles north of the Santa Monica Freeway (I-10). The Project lies within an urbanized area consisting primarily of residential, hotel, and commercial uses. In the vicinity of the Project Site, the West Los Angeles community is served by major streets such as Olympic Boulevard, Santa Monica Boulevard, Pico Boulevard, and Beverly Glen Boulevard. Transit bus service is provided along Olympic Boulevard, Pico Boulevard, Santa Monica Boulevard, Beverly Glen Boulevard, and Century Park West.

STUDY SCOPE

The scope of analysis for this study was developed in consultation with LADOT and is consistent with *Transportation Assessment Guidelines* (LADOT, July 2020) (the TAG) and in compliance with the California Environmental Quality Act (CEQA) Guidelines (California Code of Regulations, Title 14, Section 15000 and following). The base assumptions and technical methodologies (i.e., trip generation, study locations, analysis methodology, etc.) were identified as part of the study approach and were outlined in a Memorandum of Understanding (MOU) that was reviewed and approved by LADOT in March 2019 and is provided in Appendix A.

ORGANIZATION OF REPORT

This report is divided into six chapters, including this Introduction. Chapter 2 describes the Project context including the existing and future circulation system, traffic volumes, and traffic conditions in the Study Area. Chapter 3 discusses the methodologies used to forecast Project traffic and the Project-related traffic volumes. Chapter 4 presents the CEQA analysis of transportation impacts. Chapter 5 details the non-CEQA transportation analyses. Chapter 6 summarizes the analyses and study conclusions. The appendices contain supporting documentation, including the MOU that outlines the study scope and assumptions, and additional details supporting the technical analyses.



Source: Van Tilburg, Banvard & Soderbergh, AIA. December, 2018.

PROJECT SITE PLAN

FIGURE 1

PROJECT SITE LOCATION

FIGURE 2A

Chapter 2
Project Context

A comprehensive data collection effort was undertaken to develop a detailed description of existing and future conditions in the Project Study Area.

The Existing Conditions analysis includes an assessment of the existing transportation infrastructure and conditions of the Study Area including freeway and street systems, and transit service, as well as pedestrian and bicycle circulation, at the time the MOU was approved in March 2019. An inventory of lane configurations, signal phasing, parking restrictions, etc., for the analyzed intersections was also collected.

In addition, this Chapter contains a discussion of the future conditions detailing the assumptions used to develop the Future without Project Conditions in Year 2023, which corresponds to projected occupancy of the Project.

STUDY AREA

As shown in Figure 2B, the Study Area includes a geographic area generally bounded by Santa Monica Boulevard to the north, Avenue of the Stars to the east, Pico Boulevard to the south, and Beverly Glen Boulevard to the west, as well as the transportation infrastructure described below. The intersections within the Study Area were selected in consultation with LADOT based on the following factors identified in the TAG:

1. Primary Project driveway(s)
2. Intersections at either end of the block on which the Project is located or up to 600 feet from the primary Project driveway(s)
3. Unsignalized intersections adjacent to the Project Site that are integral to the Project's site access and circulation plan

4. Signalized intersections in proximity to the Project Site where 100 or more Project trips would be added

As listed in Table 1, a total of eight signalized intersections located within the City were identified for detailed analysis of the above conditions. The existing lane configurations at the analyzed intersections are provided in Figure 3.

EXISTING TRANSPORTATION CONDITIONS

Existing Street System

The existing street system in the Study Area consists of a regional roadway system including Arterial Streets and Local Streets that provide regional, sub-regional, or local access and circulation to the Project Site. These transportation facilities generally provide two to four travel lanes and usually allow parking on either side of the street. Typically, the speed limits range between 25 and 35 miles per hour (mph) on the streets and between 55 mph on freeways.

Street classifications are designated in *Mobility Plan 2035, An Element of the General Plan* (LADCP, September 2016) (the Mobility Plan). The Mobility Plan defines specific street standards in an effort to provide an enhanced balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc. Per the Mobility Plan, street classifications are defined as follows:

- Freeways are high-volume, high-speed roadways with limited access provided by interchanges that carry regional traffic through and do not provide local access to adjacent land uses.
- Arterial Streets are major streets that serve through traffic, as well as provide access to major commercial activity centers. Arterials are divided into two categories:
    - Boulevards represent the widest Arterial Streets that typically provide regional access to major destinations and include two categories:
        - Boulevard I provides up to four travel lanes in each direction with a target operating speed of 40 mph, and generally includes a right-of-way (ROW) width of 136 feet and pavement width of 100 feet.

        - Boulevard II provides up to three travel lanes in each direction with a target operating speed of 35 mph, with ROW widths varying from 104-110 feet, and pavement widths from 70-80 feet.

    - Avenues are typically narrower Arterial Streets that pass through both residential and commercial areas and include three categories:

        - Avenue I provides up to two travel lanes in each direction with a target operating speed of 35 mph, with a ROW width of 100 feet and pavement width of 70 feet.

        - Avenue II provides up to two travel lanes in each direction with a target operating speed of 30 mph, with a ROW width of 86 feet and pavement width of 56 feet.

        - Avenue III provides up to two travel lanes in each direction with a target operating speed of 25 mph, with a ROW width of 72 feet and pavement width of 46 feet.

- Collector Streets are generally located in residential neighborhoods and provide access to and from Arterial Streets for local traffic and are not intended for cut-through traffic. They provide one travel lane in each direction with operating speed of 25 mph, with a ROW width generally at 65 feet and pavement width of 44 feet.

- Local Streets are intended to accommodate lower volumes of vehicle traffic and provide parking on both sides of the street. They provide one travel lane in each direction with a target operating speed of 15 to 20 mph. Pavement widths may vary between 30-36 feet within a ROW width of 50-60 feet. Local Streets include two categories:

    - Continuous Local Streets connect to other streets at both ends

    - Non-continuous Local Streets lead to a dead-end

Primary regional access to the Project Site is provided by I-405 and I-10, which generally run in the north-south and east-west directions, respectively. I-405 is located approximately 1.50 miles west of the Project Site. Access to I-405 is provided via interchanges at Wilshire Boulevard, Santa Monica Boulevard, Sawtelle Boulevard, and Sepulveda Boulevard. I-10 is located approximately 1.80 miles south of the Project Site. Access to I-10 is provided via interchanges at Overland Avenue and Manning Avenue. In proximity to the Project Site, the Study Area is served by Arterial Streets including Beverly Glen Boulevard, Santa Monica Boulevard, Olympic Boulevard, and Pico Boulevard. The following is a brief description of the roadways in the Study Area, including their classifications in the Mobility Plan:

Roadways

- Beverly Glen Boulevard – Beverly Glen Boulevard is a designated Avenue I and travels in the north-south direction. It is located west of the Project Site and provides four travel lanes, two lanes in each direction, with left-turn lanes at intersections. Travel lanes are generally 11-12 feet wide and the total paved width is 70 feet. Unmetered on-street parking is generally available on both sides of the street within the Study Area.

- Century Park West – Century Park West is a designated Avenue II and travels in the north-south direction. It is located east of the Project Site and provides four travel lanes, two lanes in each direction, with left-turn lanes at intersections. Travel lanes are generally 11-12 feet wide and the total paved width is 56 feet. On-street parking is generally not available on this street within the Study Area.

- Avenue of the Stars – Avenue of the Stars is a designated Boulevard II and travels in the north-south direction. It is located east of the Project Site and provides six travel lanes, three lanes in each direction, with left-turn lanes at intersections and a center median. Travel lanes are generally 11-12 feet wide and the total paved width is 80 feet. On-street parking is generally not available on this street within the Study Area.

- Motor Avenue – Motor Avenue is a designated Collector Street and travels in the north-south direction. It is located southeast of the Project Site and provides two travel lanes, one lane in each direction, with left-turn lanes at intersections and a center median. Travel lanes are generally 12 feet wide and the total paved width is 60 feet. Unmetered on-street parking is generally provided on both sides of the street within the Study Area.

- Bellwood Avenue – Bellwood Avenue is a designated Local Street and travels in the east-west direction. It travels through the Project Site and provides access to the existing Project Site driveways. It contains two travel lanes, one lane in each direction. Travel lanes are generally 10 feet wide and the total paved width is 36 feet. Unmetered on-street parking with permit is available on both sides of the street within the Study Area.

- Santa Monica Boulevard – Santa Monica Boulevard is a designated Boulevard II and travels in the east-west direction. Within the Study Area, Santa Monica Boulevard is identified as State Route 2. It is located north of the Project Site and provides six travel lanes, three lanes in each direction, with left-turn lanes at intersections. Travel lanes are generally 11-12 feet wide and the total paved width is 80 feet. On-street parking is generally not available on Santa Monica Boulevard within the Study Area. In addition, an auxiliary one-way eastbound travel lane runs adjacent to Santa Monica Boulevard, where metered on-street parking is provided on both sides within the Study Area.

- Olympic Boulevard – Olympic Boulevard is a designated Boulevard II and travels in the east-west direction. It is located north of the Project Site and provides seven travel lanes, three eastbound lanes and four westbound lanes, with left-turn lanes at intersections. Travel lanes are generally 10-11 feet wide and the total paved width is 80 feet. Unmetered on-street parking is generally available on the north side of the street, with afternoon peak hour restrictions within the Study Area.

- Pico Boulevard – Pico Boulevard is a designated Avenue I and travels in the east-west direction. It is located south of the Project Site and provides six travel lanes, three lanes in

each direction, with left-turn lanes at intersections. Travel lanes are generally 11-12 feet wide and the total paved width is 70 feet. Unmetered on-street parking is generally provided on the north side of the street with afternoon peak hour restrictions, and on the south side of the street with morning and afternoon peak hour restrictions within the Study Area.

As required in the TAG, an inventory was collected of facilities serving pedestrians, bicyclists, and transit riders within the Study Area. The existing intersection mobility facilities at the study intersections are shown in Figure 4. The existing transportation facilities within the Study Area are shown in Figure 5.

Existing Pedestrian Facilities

The walkability of existing facilities is based on the availability of pedestrian routes necessary to accomplish daily tasks without the use of an automobile. These attributes are quantified by WalkScore.com and assigned a score out of 100 points. With the various commercial businesses and cultural facilities adjacent to residential neighborhoods, the walkability of the area is approximately 80 points[2].

Currently along the Project frontage, sidewalks along both sides of Bellwood Avenue serving as routes to the Project Site provide connectivity, connecting to pedestrian crossing at intersections within the Study Area. The nearby signalized study intersections provide pedestrian facilities, including curb ramps on all approaches, pedestrian phasing, high-visibility crosswalk striping, and Americans with Disabilities Act (ADA) accessible curb ramps, as shown in Figure 4. In addition, the signalized intersection of Century Park West & Olympic Boulevard provides pedestrian facilities including marked pedestrian crossings on all approaches, pedestrian phasing, and ADA accessible ramps.

Pedestrian destinations within the Study Area of the Project Site are also shown in Figure 5, including local commercial and residential uses located north and east of the Project Site along Olympic Boulevard.

[2] Walk Score (www.walkscore.com) rates the Project Site with a score of 80 of 100 possible points (scores accessed on August 3, 2020 for 10341 Bellwood Avenue). Walk Score calculates the walkability of specific addresses by taking into account the ease of living in the neighborhood with a reduced reliance on automobile travel.

Vision Zero

As described in *Vision Zero: Eliminating Traffic Deaths in Los Angeles by 2025* (City of Los Angeles, August 2015), Vision Zero is a traffic safety policy that promotes strategies to eliminate collisions that result in severe injury or death. Vision Zero has identified the High Injury Network (HIN), a network of streets based on the collision data from the last five years, where strategic investments will have the biggest impact in reducing death and severe injury. It should be noted that in proximity to the Study Area, Santa Monica Boulevard west of Beverly Glen Boulevard has been identified in the HIN as shown in Figure 5. However, the Project is not located along a HIN corridor.

Existing Bicycle System

Based on *2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element* (Los Angeles Department of City Planning, adopted March 1, 2011) (2010 Bicycle Plan), the existing bicycle system consists of a limited network of bicycle lanes (Class II) and bicycle routes (Class III). Class II bicycle lanes are a component of street design with dedicated striping, separating vehicular traffic from bicycle traffic. These facilities offer a safer environment for both cyclists and motorists. Class III bicycle routes and bicycle-friendly streets are those where motorists and cyclists share the roadway and there is no separated striping for bicycle travel. Bicycle routes and bicycle-friendly streets are preferably placed on collector and low volume arterial streets. Bicycle routes with shared lane markings, or “sharrows”, remind bicyclists to ride farther from parked cars to prevent collisions, increase awareness of motorists that bicycles may be in the travel lane, and show bicyclists the correct direction of travel.

The components of the 2010 Bicycle Plan have been incorporated into the bicycle network of the Mobility Plan. The Mobility Plan consists of a Bicycle Enhanced Network (Low-Stress Network) (BEN) and a Bicycle Lane Network (BLN). The BEN is a subset of and supplement to the 2010 Bicycle Plan and is comprised of a network of streets that prioritize bicyclists and provide bicycle paths and protected bicycle lanes (Class IV). Class IV protected bicycle lanes including cycle tracks, bicycle traffic signals, and demarcated areas to facilitate turns at intersections and along neighborhood streets, provide further protection from other travel lanes. Class IV networks often provide mini-roundabouts, cross-street stop signs, crossing islands at major intersection

crossings, improved street lighting, bicycle boxes, and bicycle-only left-turn pockets. Once implemented, these facilities would offer a safer environment for both cyclists and motorists. The BLN consists of Class II bicycle lanes with striped separation from motorized vehicle traffic.

Within the immediate vicinity of the Project Site, Class II bicycle lanes are provided along Motor Avenue and Santa Monica Boulevard west of Avenue of the Stars as shown in Figure 5.

Existing Transit System

Figure 6 illustrates the existing transit service routes in and around the Study Area, which is served by bus lines operated by the Los Angeles County Metropolitan Transportation Authority (Metro), Culver CityBus, Santa Monica Big Blue Bus, Antelope Valley Transit Authority, Santa Clarita Transit, and LADOT Commuter Express.

Table 2 summarizes the bus lines operating in and around the Study Area for each of the service providers in the region, the type of service (peak vs. off-peak, express vs. local), and frequency of service. The average frequency of transit service during the peak hours was derived from schedule information from each respective transit provider for the stop nearest the Project Site, as well as detailed trip data from April 2019 provided by Metro and schedule information from each respective transit provider.

Bus stops that serve the Project Site (i.e., within 0.25 miles walking distance) are currently provided along Olympic Boulevard at Beverly Glen Boulevard, Kerwood Avenue, and Century Park West. Table 3 summarizes the available capacity of the Culver City and Santa Monica bus systems during the morning and afternoon peak hours, respectively, based on the frequency of service of each line, detailed ridership data provided by the transit provider, and the maximum seated and standing capacity of each bus. As shown in Table 3, based on ridership data from March 2019 provided by Culver City Bus and Santa Monica Big Blue Bus, the transit lines within a 0.25-mile walking distance of the Project Site have available capacity for approximately 660 additional riders during the morning peak hour and 636 riders during the afternoon peak hour.

Existing Traffic Volumes

Intersection turning movement counts during the typical weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) commuter peak periods were conducted at the eight study intersections in April 2019 prior to the State and City's response to COVID-19 and while local schools were in session, businesses were operational, etc. Additional historical traffic counts at both intersections of Bellwood Avenue at Olympic Boulevard from April 2006 were also reviewed and considered. The existing intersection peak hour traffic volumes, representing Existing Conditions in Year 2019, are illustrated in Figure 7. Traffic count summaries are provided in Appendix B.

FUTURE CUMULATIVE TRANSPORTATION CONDITIONS

The forecast of Future without Project Conditions was prepared in accordance with procedures outlined in the CEQA Guidelines. Specifically, two options are provided for developing the cumulative traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> "(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency."

As described in detail below, this analysis includes increases to traffic from future projects (option "A" above, the "Related Projects") and from regional growth projections (option "B" above, or ambient growth). The ambient growth factor discussed below likely includes some traffic increases resulting from the Related Projects. Therefore, through some inherent double-counting of vehicles, the traffic analysis provides a highly conservative estimate of Future without Project traffic volumes.

The Future without Project traffic volumes, therefore, include ambient growth, which reflects increases in traffic due to regional growth and development outside the Study Area, as well as traffic generated by ongoing or entitled projects near or within the Study Area.

Ambient Traffic Growth

Existing traffic levels have historically been projected to increase as a result of regional growth and development. Based on discussions with LADOT through the MOU process, an ambient growth factor of 1% per year compounded annually was applied to the Existing Conditions traffic volumes to provide a conservative estimate of future background conditions for Year 2023. The total adjustment applied over the four-year period is 4.06%.

Related Projects

In accordance with the CEQA Guidelines, this study also considered the effects of the Project on other developments either proposed, approved, or under construction (collectively, the Related Projects). Including this analysis step, the potential impact of the Project is evaluated within the context of past, present, and probable future developments capable of producing cumulative impacts.

The list of Related Projects is based on information provided by LADCP and LADOT in January 2019, as well as recent studies of development projects in the area. The Related Projects are detailed in Table 4 and their approximate locations shown in Figure 8. Though the buildout years of many of these Related Projects are uncertain and may occur beyond the buildout year of the Project, and notwithstanding that some may never be approved or developed, they were all considered as part of this Study and conservatively assumed to be completed by the Project buildout Year 2023. Therefore, the traffic growth due to the development of Related Projects considered in this analysis is conservative and, by itself, substantially overestimates the actual traffic volume growth in the West Los Angeles area that would likely occur in the next three years prior to Project buildout. With the addition of the 1% per year ambient growth factor previously discussed, the Future without Project Condition is even more conservative.

Using these assumptions, the potential traffic impacts of the Project were evaluated. Estimating the Related Projects' traffic volume contributions to the study intersections involves the use of a three-step process: trip generation, trip distribution, and trip assignment.

Trip Generation. Trip generation estimates for the Related Projects were provided by LADOT or were calculated using a combination of previous study findings and the trip generation rates contained in *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers, 2017). The Related Projects trip generation estimates summarized in Table 4 are conservative in that they do not in every case account for any trips generated by the existing uses to be removed or the likely use of other travel modes (e.g., transit, bus, bicycling, walking, carpool, etc.) Further, in many cases, they do not account for the internal capture trips within a multi-use development or for the interaction of trips between multiple Related Projects, in which one Related Project serves as the origin for a trip destined for another Related Project.

Trip Distribution. The geographic distribution of the traffic generated by the Related Projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which the employees/residents and potential patrons of the proposed developments are drawn, and the location of these projects in relation to the surrounding street system. These factors are considered along with logical travel routes through the street system to develop a reasonable pattern of trip distribution.

Traffic Assignment. The trip generation estimates for the Related Projects were assigned to the local street system using the trip distribution pattern described above. Figure 9 shows the peak hour traffic volumes associated with these Related Projects at the study intersections.

Future without Project Traffic Volumes

The Related Projects volumes were then added to the existing traffic volumes after adjustment for ambient growth through the projected Project completion year of 2023. As discussed above, this is a conservative approach as many of the Related Projects may already be reflected in the ambient growth rate. These volumes represent the Future without Project Conditions (i.e., ambient traffic growth and Related Project traffic growth added to existing traffic volumes) for Year 2023 and are shown in Figure 10 for the eight study intersections.

Future Roadway Improvements

The analysis of future conditions considered roadway improvements that were funded and reasonably expected to be implemented prior to the buildout of the proposed Project. Any roadway improvement that would result in changes to the physical configuration at the study intersections would be incorporated into the analysis. However, these improvements depend on the construction of the development projects, which are not guaranteed to be built or may not be completed by Project buildout. Therefore, this analysis conservatively concluded that these improvements would not be implemented by Year 2023.

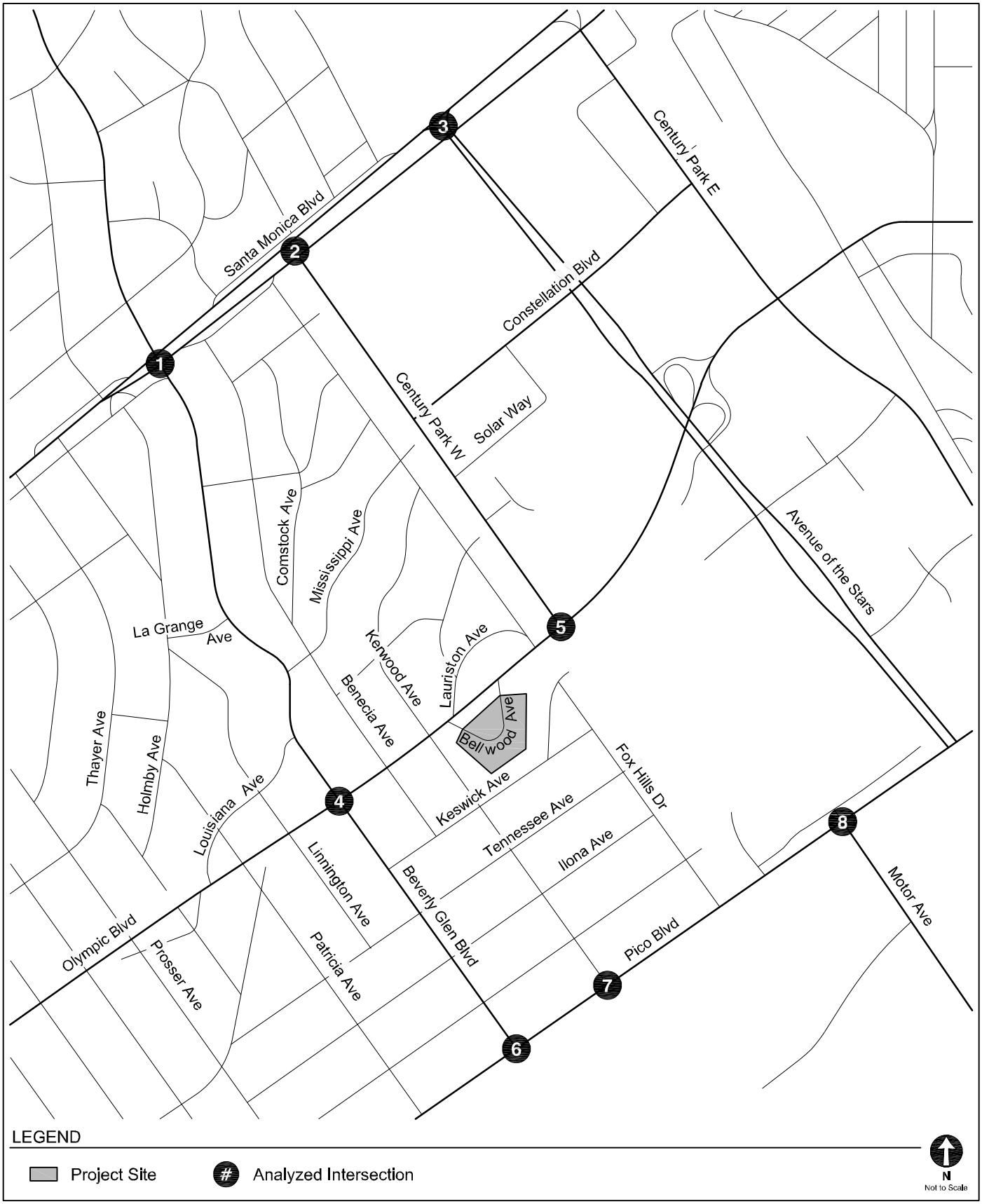
Mobility Plan. In the Mobility Plan, the City identifies key corridors as components of various "mobility-enhanced networks." Each network is intended to focus on improving a particular aspect of urban mobility, including transit, neighborhood connectivity, bicycles, pedestrians, and vehicles. The specific improvements that may be implemented in those networks have not yet been identified, and there is no schedule for implementation; therefore, no changes to intersection lane configurations were made as a result of the Mobility Plan. However, as detailed below, the mobility-enhanced networks included corridors within the Study Area and are depicted in Figure 11:

- Transit Enhanced Network (TEN): The TEN aims to improve existing and future bus services through reliable and frequent transit service in order to increase transit ridership, reduce single-occupancy vehicle trips, and integrate transit infrastructure investments within the surrounding street system. Pico Boulevard and Santa Monica Boulevard within the Study Area have been designated as part of the TEN.

- Neighborhood Enhanced Network (NEN): The NEN reflects the synthesis of the bicycle and pedestrian networks and serves as a system of local streets that are slow moving and safe enough to connect neighborhoods through active transportation. The NEN designates Tennessee Avenue as part of the network.

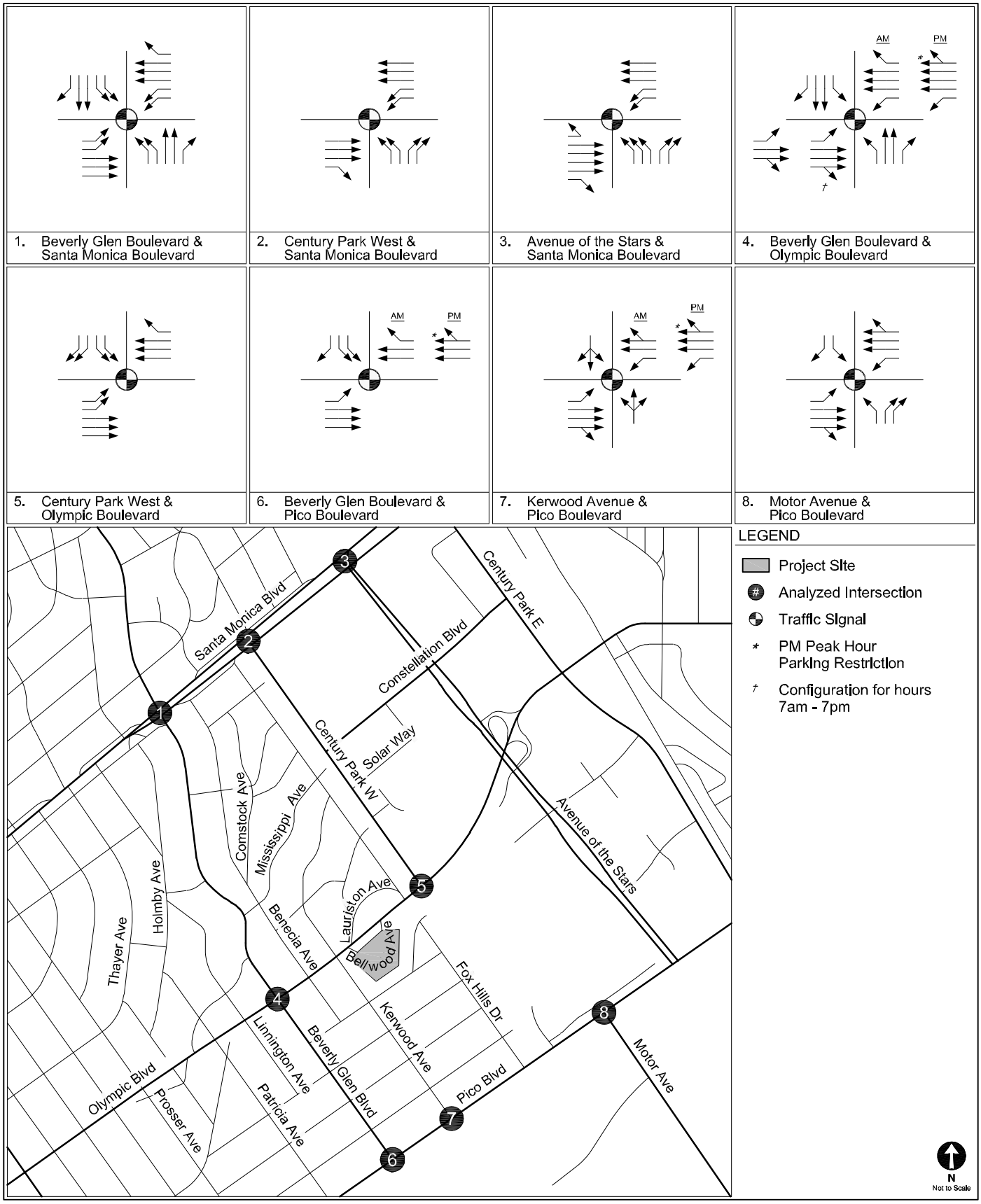
- BEN / BLN: Santa Monica west of Century Park East within the Study Area has been identified as part of the BEN, and Avenue of the Stars, Pico Boulevard, and Beverly Glen Boulevard north of Santa Monica Boulevard as part of the BLN.

- Pedestrian Enhanced District (PED): The Mobility Plan aims to promote walking to reduce the reliance on automobile travel by providing more attractive and pedestrian-friendly sidewalks, as well as adding pedestrian signalizations, street trees, and pedestrian-oriented design features. Beverly Glen Boulevard north of La Grange Avenue and between Louisiana Avenue and Ilona Avenue, Olympic Boulevard west of Benecia Avenue and east of Bellwood Avenue, Century Park West, Avenue of the Stars, Constellation Boulevard, and Santa Monica Boulevard are designated as part of the PED.



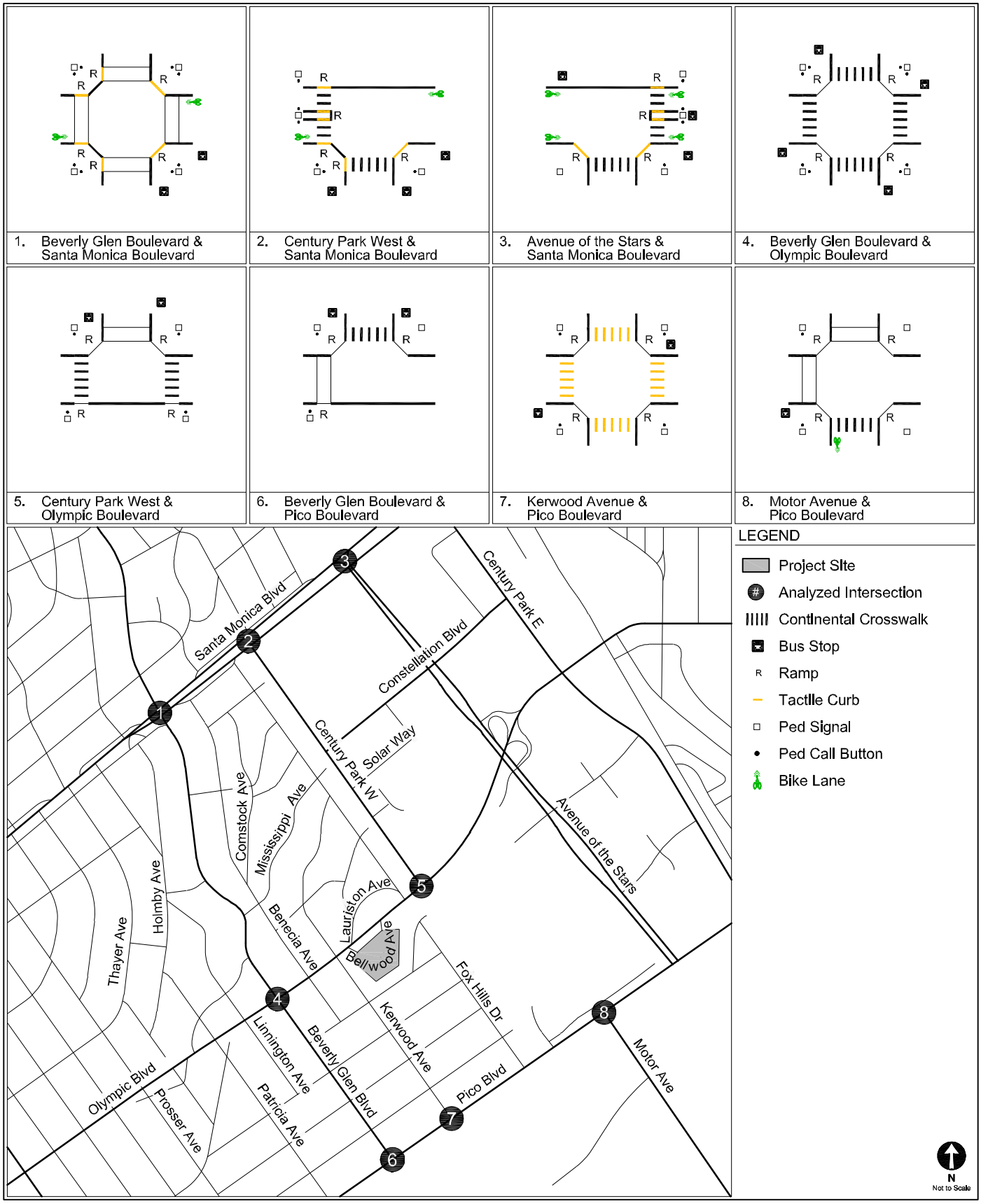
STUDY AREA & ANALYZED INTERSECTIONS

FIGURE 2B



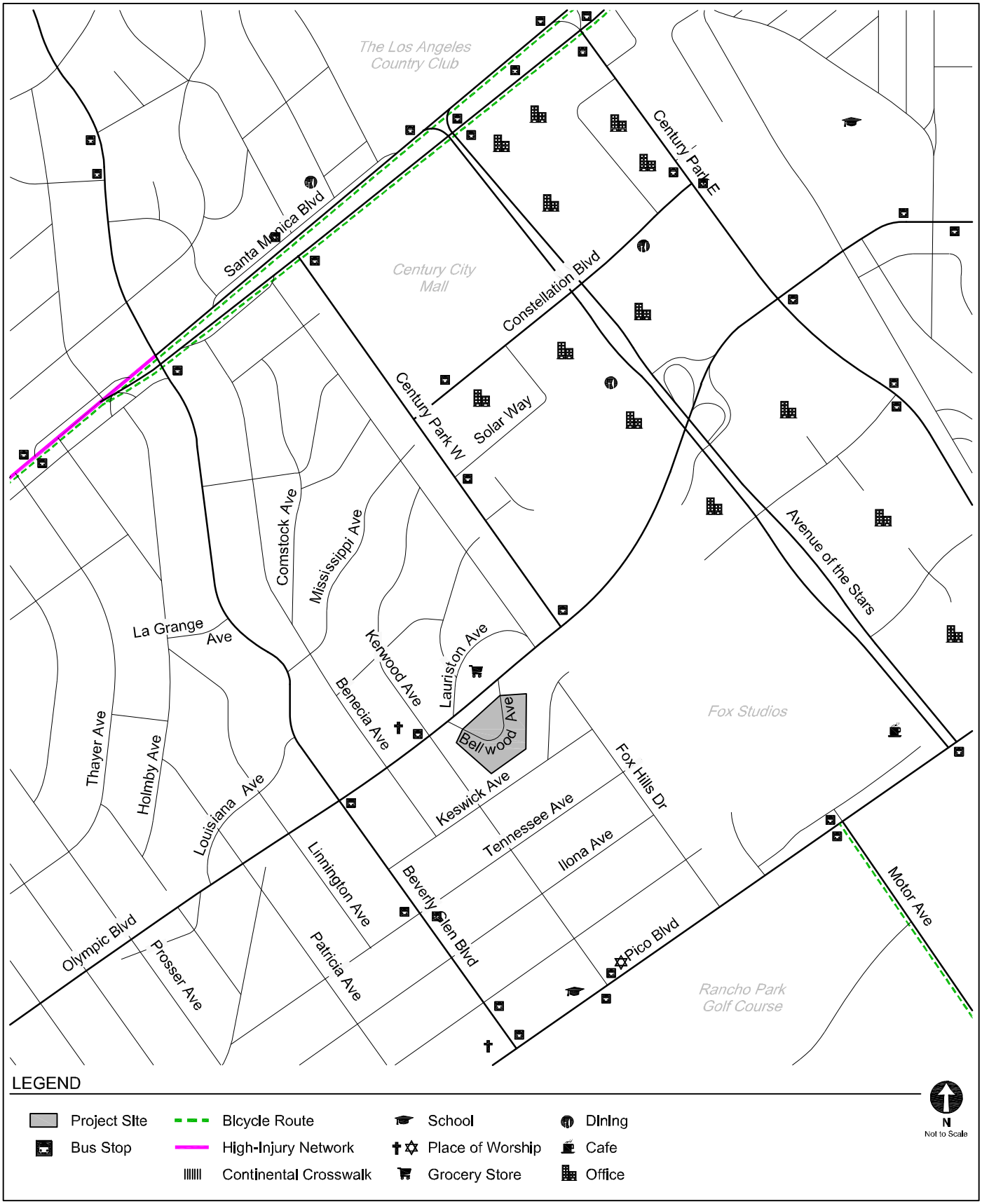
EXISTING INTERSECTION LANE CONFIGURATIONS

FIGURE 3



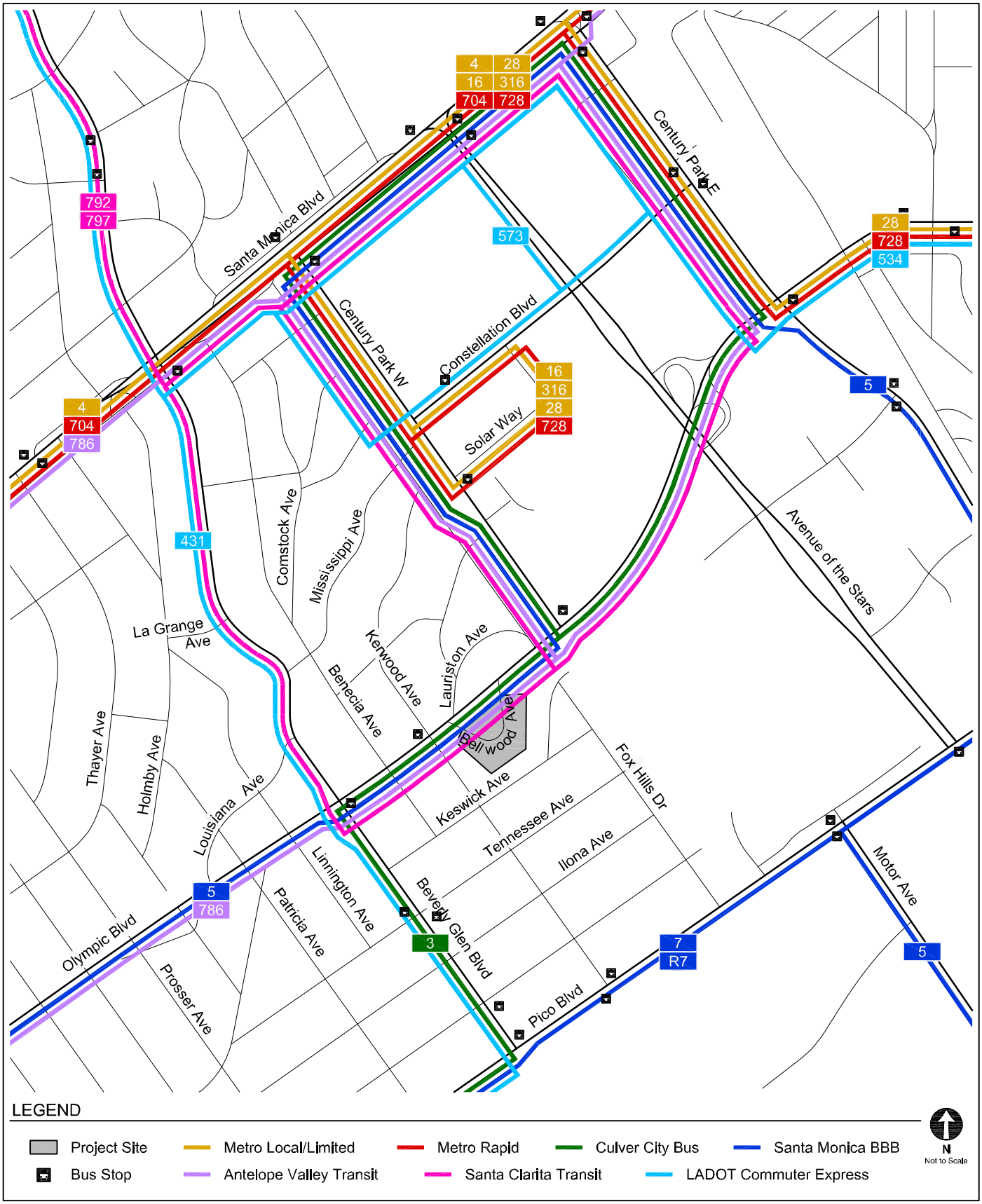
EXISTING INTERSECTION MOBILITY FACILITIES

FIGURE 4



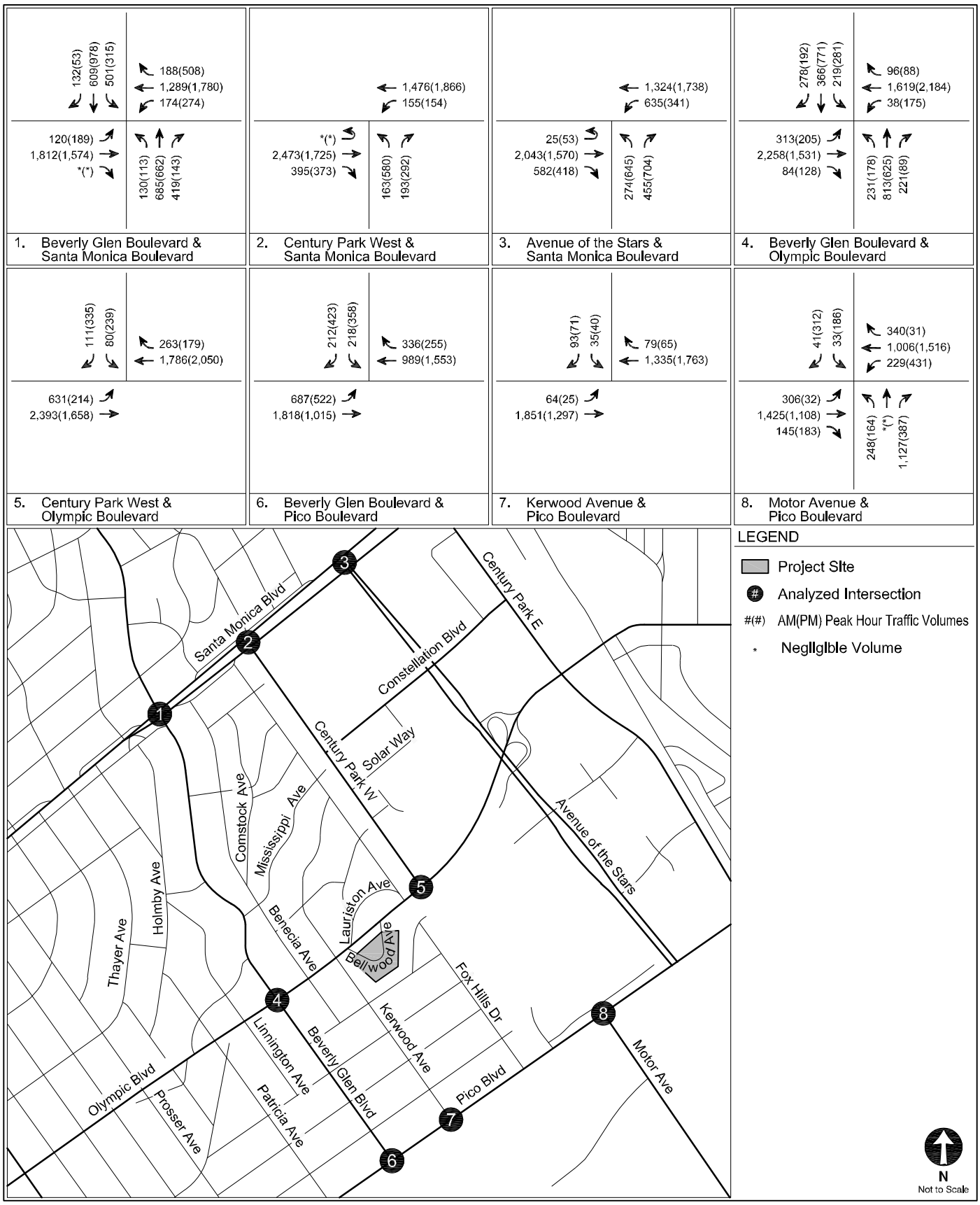
EXISTING TRANSPORTATION FACILITIES & PEDESTRIAN DESTINATIONS

FIGURE 5



EXISTING TRANSIT SERVICE

FIGURE 6

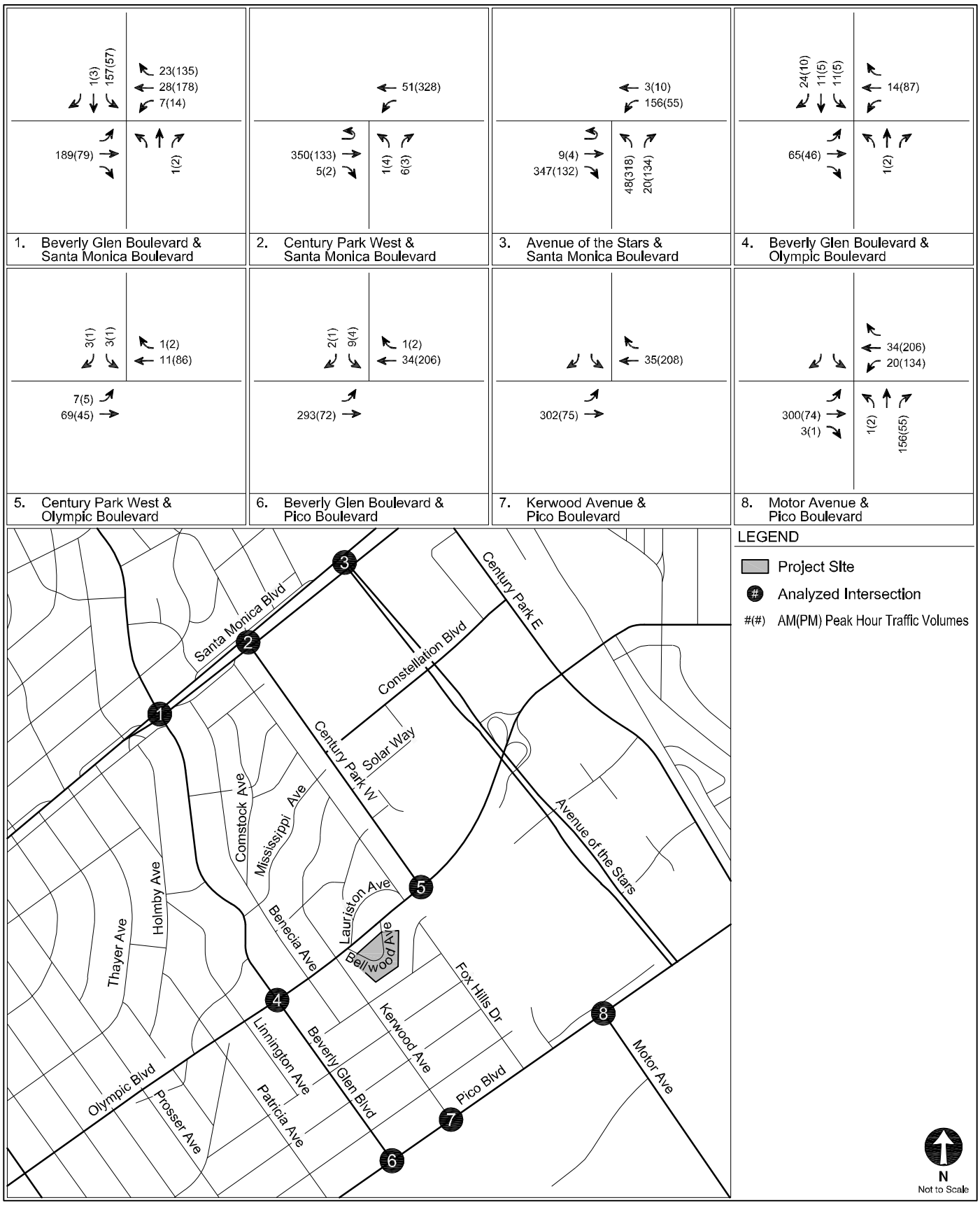


EXISTING CONDITIONS (YEAR 2019)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 7

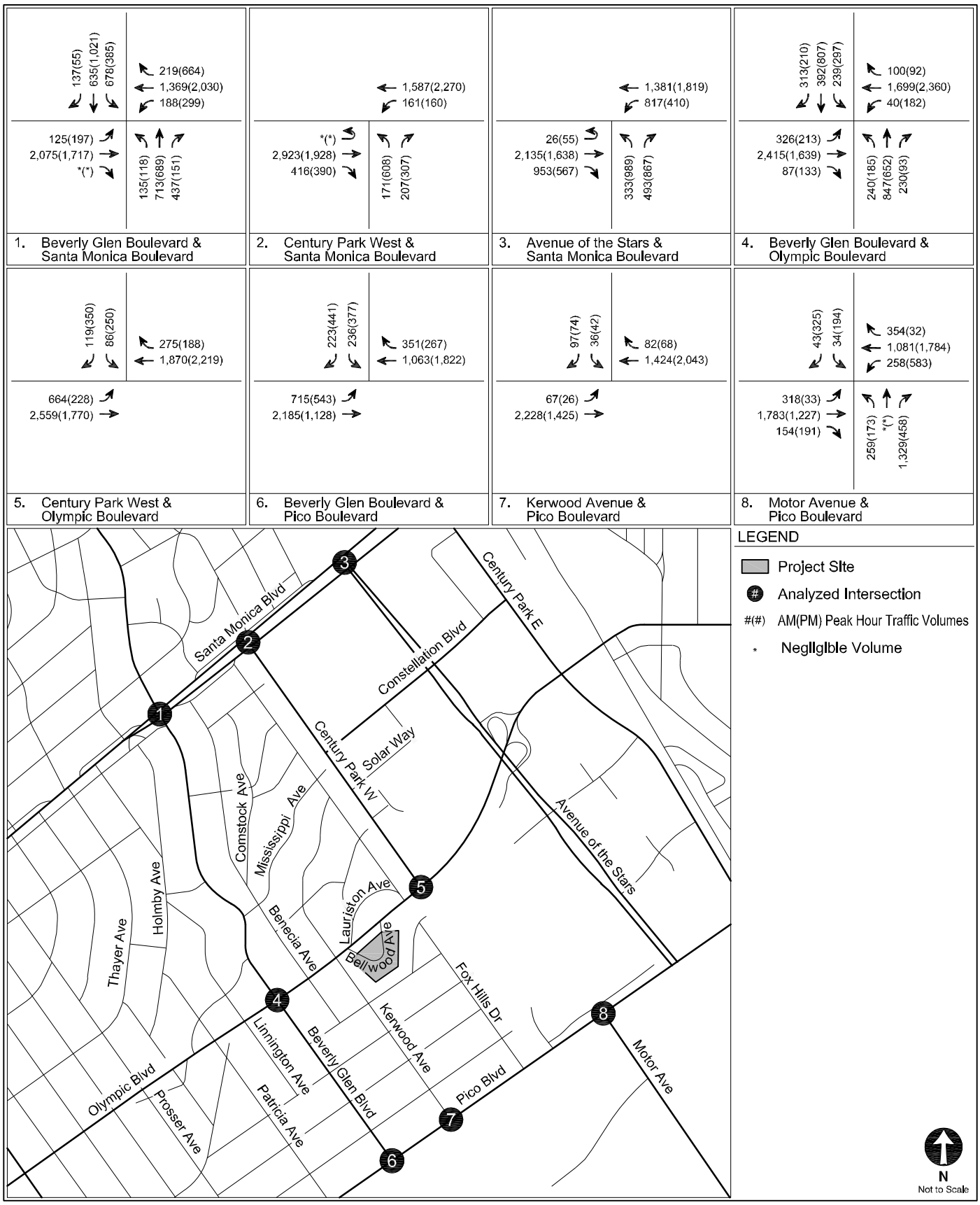
LOCATIONS OF RELATED PROJECTS

FIGURE 8



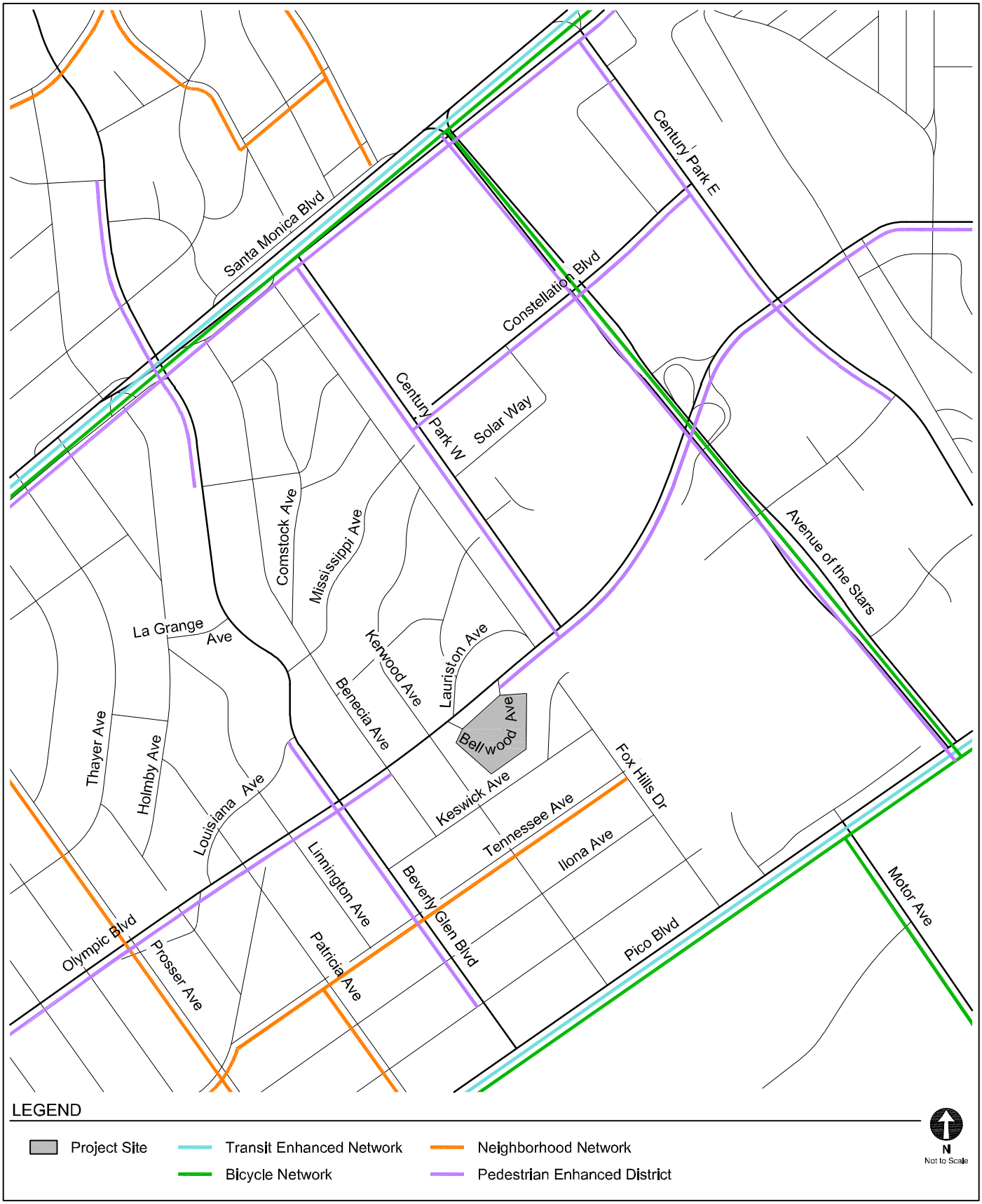
RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
9



FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 10



ROADWAY MODAL PRIORITIES

FIGURE 11

TABLE 1
STUDY INTERSECTIONS

No.	North/South Street	East/West Street	Jurisdiction
1.	Beverly Glen Boulevard	Santa Monica Boulevard	City of Los Angeles / Caltrans
2.	Century Park W	Santa Monica Boulevard	City of Los Angeles / Caltrans
3.	Avenue of the Stars	Santa Monica Boulevard	City of Los Angeles / Caltrans
4.	Beverly Glen Boulevard	Olympic Boulevard	City of Los Angeles
5.	Century Park W	Olympic Boulevard	City of Los Angeles
6.	Beverly Glen Boulevard	Pico Boulevard	City of Los Angeles
7.	Kerwood Avenue	Pico Boulevard	City of Los Angeles
8.	Motor Avenue	Pico Boulevard	City of Los Angeles

TABLE 2
EXISTING TRANSIT SERVICE

Provider, Route, and Service Area		Service Type	Hours of Operation	Average Headway (minutes)			
				AM Peak Period		PM Peak Period	
Metro				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
4	Downtown Los Angeles - Santa Monica via Santa Monica Boulevard	Local	24-Hour	13	13	11	13
16	Downtown Los Angeles - Century City via 3rd Street	Local	4:15 AM - 1:30 AM	18	11	15	16
28	Downtown Los Angeles - Eagle Rock - Century City via Olympic Blvd and Eagle Rock Blvd	Local	6:30 AM - 10:00 PM	8	8	8	9
316	Downtown Los Angeles - Century City via 3rd Street	Limited	6:15 AM - 7:00 PM	9	11	11	10
704	Downtown Los Angeles - Santa Monica via Santa Monica Boulevard	Rapid	6:00 AM - 12:00 AM	15	12	13	13
728	Downtown Los Angeles - Century City via West Olympic Boulevard	Rapid	5:00 AM - 9:00 PM	13	13	15	14
Culver CityBus (CC)				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
3	Crosstown Culver City	Local	5:30 AM - 11:30 PM	16	14	16	16
Santa Monica Big Blue Bus (BBB)				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
5	Santa Monica - Century City - Palms Station Expo Line	Local	6:00 AM - 9:30 PM	27	27	24	22
7	Downtown Santa Monica - Rimpau Transit Center	Local	5:00 AM - 12:30 AM	15	15	15	15
R7	Downtown Santa Monica - Koreatown	Rapid	5:30 AM - 11:15 PM	10	10	10	10
Antelope Valley Transit Authority (AVTA)				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
786	Lancaster/Palmdale - Century City/West Los Angeles	Express	4:00 AM - 7:30 PM	N/A	20	24	N/A
Santa Clarita Transit (SC)				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
792	Santa Clarita - Century City - UCLA - Westwood	Express	7:00 AM - 6:30 PM	30	N/A	N/A	30
797	Santa Clarita - Century City - UCLA - Westwood	Express	5:15 AM - 9:00 PM	N/A	20	30	N/A
LADOT Commuter Express (CE)				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
431	Westwood - Palms - Downtown Los Angeles	Express	6:30 AM - 7:30 PM	30	N/A	N/A	30
534	Westwood - Century City - West Los Angeles - Downtown Los Angeles	Express	7:00 AM - 6:30 PM	23	N/A	N/A	23
573	Westwood - Encino - Mission Hills - Century City	Express	5:30 AM - 8:00 PM	[a]	9	9	[a]

Notes

Metro: Los Angeles County Metropolitan Transportation Authority
LADOT: Los Angeles Department of Transportation
AM Peak from 6 AM - 10 AM
PM Peak from 3 PM - 7 PM
[a] LADOT CE 573 provides one stop in the northbound direction during the AM peak period and southbound direction during the PM peak period.

TABLE 3
EXISTING TRANSIT SERVICE PATRONAGE
LINES WITHIN WALKING DISTANCE [a]

AM Peak Period							
Provider	**Route**	**Number of Runs During Peak Hour** [b]	**Capacity** [c]	**Average Load** [d]	**Load Factor (Maximum Load / Capacity)**	**Residual Capacity per Run**	**Residual Capacity in Peak Hour** [e]
Culver City	3	10	50	2	0.04	48	480
Santa Monica BBB	5	5	50	14	0.28	36	180
Total Residual Capacity in Peak Hour - Bus Line							**660**

PM Peak Period							
Provider	**Route**	**Number of Runs During Peak Hour** [b]	**Capacity** [c]	**Average Load** [d]	**Load Factor (Maximum Load / Capacity)**	**Residual Capacity per Run**	**Residual Capacity in Peak Hour** [e]
Culver City	3	9	50	6	0.12	44	396
Santa Monica BBB	5	6	50	10	0.20	40	240
Total Residual Capacity in Peak Hour - Bus Line							**636**

Notes:

[a] Lines within a 0.25-mile walking distance from the Project Site.

[b] Number of runs in both directions combined during peak hour.

[c] Capacity assumptions based on discussions with agencies:
Culver City Bus - 40 seated / 50 seated and standing.
Santa Monica Big Blue Bus - 40 seated / 50 seated and standing.

[d] Average Load is the average number of people per bus in the peak direction based on ridership data provided by Culver CityBus and Santa Monica Big Blue Bus, March 2019.

[e] Maximum residual capacity in peak hours = (Maximum residual capacity per run) x (number of peak hour runs).

TABLE 4
RELATED PROJECTS

No.	Project	Address	Use	Trip Generation [a]						
				Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
1.	Westfield Century City NCP Project [b]	10250 W Santa Monica Boulevard	358,881 sf shopping center, 262 condominium units, and -289,460 sf office	5,922	(109)	(68)	(177)	174	190	364
2.	Century City Center [c]	1950 S Avenue of the Stars	725,830 sf office, 4,120 sf ancillary retail, and 1,300 sf mobility hub	4,603	604	83	687	103	501	604
3.	26 Apt to 91 Apt or 116 Apt	10306 W Santa Monica Boulevard	91 or 116 apartments units	432	8	38	46	29	15	44
4.	Century Plaza (Hyatt Regency Hotel)	2025 S Avenue of the Stars	193 condo units, 240-room hotel, 117,647 sf office, 93,814 sf retail, 16,800 sf spa/fitness, and 15,463 sf restaurant	3,690	25	16	41	263	285	548
5.	Apartments	10400 W Santa Monica Boulevard	96 apartment units	702	10	43	53	32	18	50
6.	Fox Studio Master Plan 2016	10201 W Pico Boulevard	additional 1.1 million sf studio building	8,153	915	94	1,009	112	479	591

Notes

[a] Related project information provided by the Los Angeles Department of Transportation in January 2019, Department of City Planning, and recent traffic studies prepared in the area.

[b] For the purposes of providing a more conservative analysis, the related project information reflects the project presented in the *Environmental Impact Report for the New Century Park Project* (Matrix Environmental, Certified June 2009). Since the certification of the EIR, the project was reduced by approximately 70,000 sf and 242 residential units, thus, generating fewer trips during the weekday morning and afternoon peak hours.

[c] For the purposes of providing a more conservative analysis, the related project information reflects the modified Century City Center project that was entitled in January 2015 as part of the Final Subsequent Environmental Impact Report. An alternative residential project was also entitled for this site, which was projected to generate fewer weekday morning and afternoon peak hour trips than the modified Century City project.

Chapter 3
Project Traffic

Trip generation estimates, trip distribution patterns and trip assignments were prepared for the Project.

PROJECT TRIP GENERATION

The number of trips expected to be generated by the Project were estimated using rates published in *Trip Generation Manual, 10th Edition*. These rates are based on surveys of similar land uses at sites around the country and are used to calculate the number of vehicle trips traveling to and from the Project Site based on the size of each land use component.

The Project Site is located within walking distance (0.25 miles) of local bus stops. Therefore, appropriate trip generation reductions to account for public transit usage and walking arrivals were made for the existing residential uses in consultation with LADOT and in accordance with the TAG.

As shown in Table 5, after accounting for the removal of the existing uses currently on-site, the Project is estimated to generate 16 fewer net morning peak hour trips (10 inbound, -26 outbound) and nine fewer net afternoon peak hour trips (-16 inbound, seven outbound).

PROJECT TRIP DISTRIBUTION

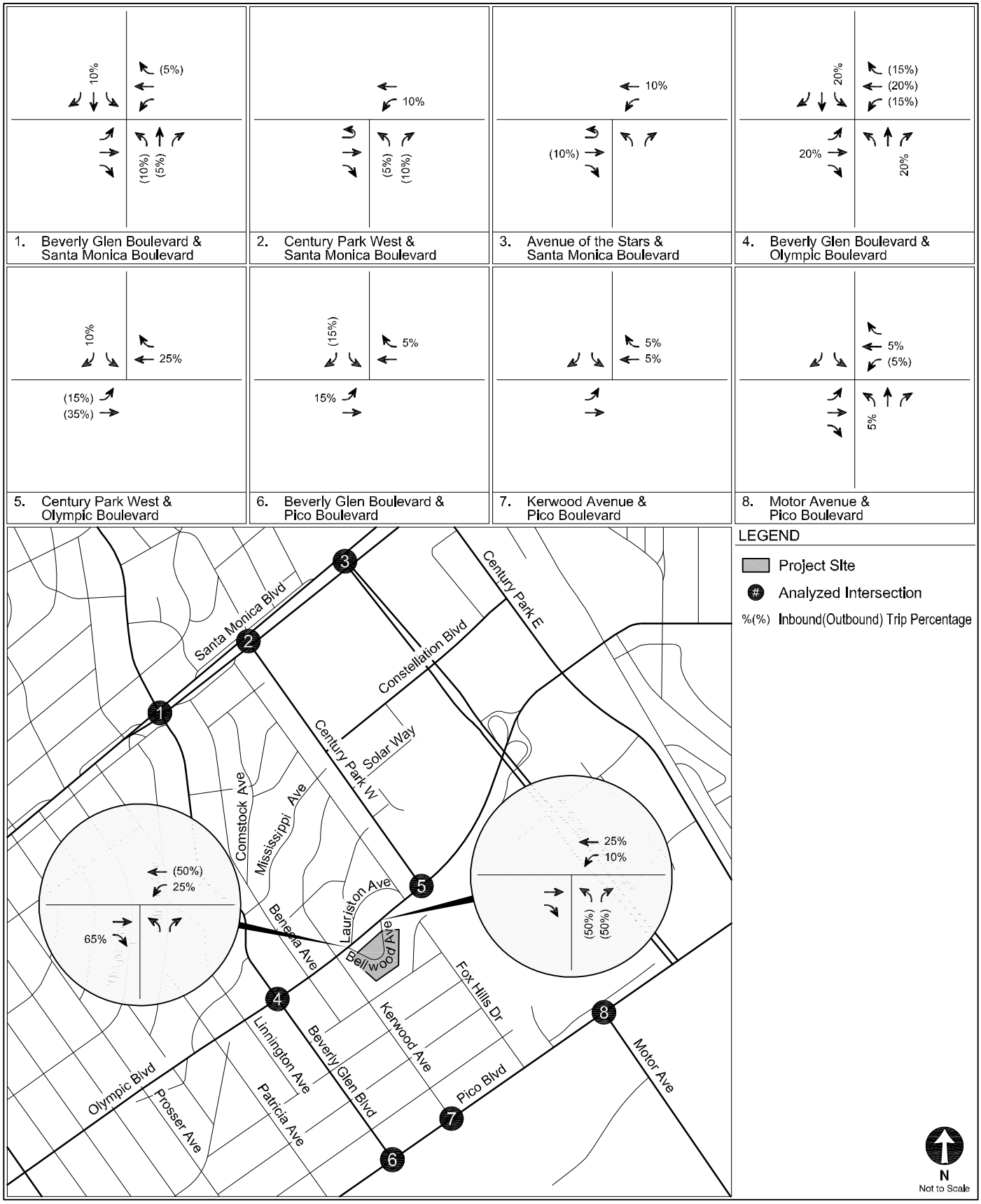
The geographic distribution of trips generated by the Project is dependent on the location of employment and residential centers from which visitors to the Project would be drawn, characteristics of the street system serving the Project Site, the level of accessibility of the routes to and from the Project Site, existing intersection traffic volumes, and the location of the proposed driveways, as well as input from LADOT staff.

The intersection-level trip distribution patterns for the Project are shown in Figure 12. Generally, the pattern is as follows:

- 10% to/from the north
- 40% to/from the east
- 15% to/from the south
- 35% to/from the west

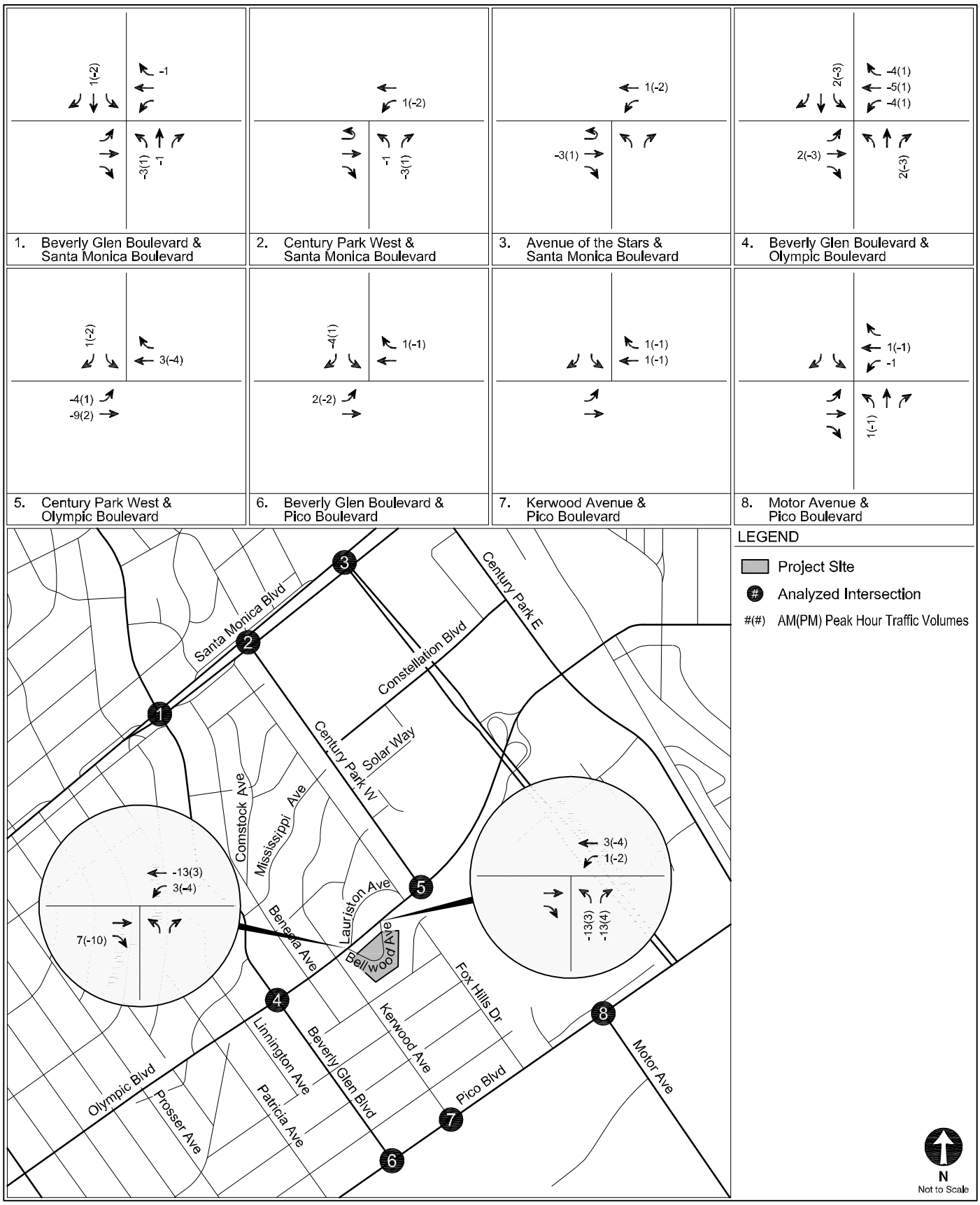
PROJECT TRIP ASSIGNMENT

The Project trip generation estimates summarized in Table 5 and the trip distribution pattern shown in Figure 12 were used to assign the Project-generated traffic through the study intersections and remove the traffic generated by the existing uses on-site. Figure 13 illustrates the combined net new traffic generated from the Project at the study intersections during typical weekday morning and afternoon peak hours.



PROJECT TRIP DISTRIBUTION

FIGURE 12



PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
13

TABLE 5
PROJECT TRIP GENERATION ESTIMATES

Land Use	ITE Land Use	Size	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Trip Generation Rates [a]								
Multifamily Housing (Low-Rise)	220	per du	23%	77%	0.46	63%	37%	0.56
Congregate Care Facility	253	per du	60%	40%	0.07	53%	47%	0.18
Assisted Living	254	per bed	63%	37%	0.19	38%	62%	0.26
Proposed Project								
Independent Living	253	71 du	3	2	5	7	6	13
Assisted Living [b]	254	99 beds	12	7	19	10	16	26
Memory Care [c]	254	46 beds	6	3	9	5	7	12
Subtotal Proposed Project Trips			**21**	**12**	**33**	**22**	**29**	**51**
Existing Uses to be Removed								
Multifamily Housing (Low-Rise)	220	112 du	12	40	52	40	23	63
Less Walk-In/Transit Reduction - 5% [d]			*(1)*	*(2)*	*(3)*	*(2)*	*(1)*	*(3)*
Subtotal - Existing Residential			**11**	**38**	**49**	**38**	**22**	**60**
TOTAL NET NEW PROJECT TRIPS			**10**	**(26)**	**(16)**	**(16)**	**7**	**(9)**

Notes

1,000 square feet = ksf.

[a] Source: *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017.

[b] The 75 assisted living guestrooms include 51 one-bedroom units and 24 two-bedroom units.

[c] The 46 memory care guestrooms consist only of studio units.

[d] Per LADOT's *Transportation Assessment Guidelines,* the Project Site is located within a 1/4 mile walking distance from a local bus stop, therefore a transit/walk-in reduction is applied to account for transit usage and walking visitor arrivals from the adjacent commercial developments.

Chapter 4
CEQA Analysis of Transportation Impacts

This chapter presents the results of an analysis of CEQA-related transportation impacts. The analysis identifies any potential conflicts the proposed Project may have with adopted City plans and policies and the improvements associated with the potential conflicts and provides the results of a Project vehicle miles traveled (VMT) analysis that addresses State requirements under *State of California Senate Bill 743* (Steinberg, 2013) (SB 743).

METHODOLOGY

SB 743, made effective in January 2014, required the Governor's Office of Planning and Research to change the CEQA guidelines regarding the analysis of transportation impacts. Under SB 743, the focus of transportation analysis shifted from vehicular delay (level of service [LOS]) to VMT, in order to reduce greenhouse gas emissions (GHG), create multimodal networks, and promote mixed-use developments.

The TAG defines the methodology of analyzing a project's transportation impacts in accordance with SB 743. Per the TAG, the CEQA transportation analysis contains the following thresholds for identifying significant impacts:

- *Threshold T-1: Conflicting with Plans, Programs, Ordinances, or Policies*
- *Threshold T-2.1: Causing Substantial Vehicle Miles Traveled (VMT)*
- *Threshold T-2.2: Substantially Inducing Additional Automobile Travel*
- *Threshold T-3: Substantially Increasing Hazards Due to a Geometric Design Feature or Incompatible Use*

The thresholds were reviewed and analyzed, as detailed in the following Sections 4A-4D. In addition, a CEQA safety analysis of California Department of Transportation (Caltrans) facilities for the Project is provided in Section 4E.

Section 4A: Threshold T-1

Conflicting with Plans, Programs, Ordinances, or Policies Analysis

Threshold T-1 assesses whether a project would conflict with an adopted program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities.

PLANS, PROGRAMS, ORDINANCES, AND POLICIES

Table 2.1-1 of the TAG identifies the City plans, policies, programs, ordinances, and standards relevant in determining project consistency. Attachment D of the TAG, *Plans, Policies, and Programs Consistency Worksheet*, provides a structured approach to evaluate whether a project conflicts with the City's plans, programs, ordinances, or policies and to streamline the review by highlighting the most relevant plans, policies, and programs when assessing potential impacts to the City's transportation system. The *Plans, Policies, and Programs Consistency Worksheet* was completed for the Project and provided in Appendix C.

As stated in Section 2.1.4 of the TAG, a project that generally conforms with, and does not obstruct the City's development policies and standards will generally be considered to be consistent. The Project is consistent with the City documents listed in Table 2.1-1 of the TAG; therefore, the Project would not result in a significant impact under Threshold T-1. Detailed discussion of the plans, programs, ordinances, or policies related to the Project is provided below.

Mobility Plan

The Mobility Plan combines "complete street" principles with the following five goals that define the City's mobility priorities:

- Safety First: Design and operate streets in a way that enables safe access for all users, regardless of age, ability, or transportation mode of choice.

- World Class Infrastructure: A well-maintained and connected network of streets, paths, bikeways, trails, that more provides Angelenos with the optimum variety of mode choices.

- Access for All Angelenos: A fair and equitable system must be accessible to all and must pay particularly close attention to the most vulnerable users.

- Collaboration, Communication, and Informed Choices: The impact of new technologies on our day-to-day mobility demands will continue to become increasingly important to the future. The amount of information made available by new technologies must be managed responsibly in the future.

- Clean Environments and Healthy Communities: Active transportation modes such as bicycling and walking can significantly improve personal fitness and create new opportunities for social interaction, while lessening impacts on the environment.

A detailed analysis of the Project's consistency with the Mobility Plan is provided in Table 6. As detailed in Chapter 2, the Mobility Plan identifies corridors within the Study Area as components of various "mobility-enhanced networks." Though no specific improvements have been identified and there is no schedule for implementation, the mobility-enhanced networks represent a focus on improving a particular aspect of urban mobility, including transit, neighborhood connectivity, bicycles, pedestrians, and vehicles. The Project would support the implementation of the Mobility Plan policies.

Vehicular access to the Project's parking would be provided via one driveway from Bellwood Avenue, a designated Local Street. With development of the Project, the portion of Bellwood Avenue that bifurcates the Project Site would be vacated and realigned as a private street. As further detailed in Section 5E, the Project would provide off-street parking to satisfy Los Angeles Municipal Code (LAMC) requirements.

The Project would also enhance pedestrian access within and around the Project Site by widening pedestrian walkways and planting new street trees along Bellwood Avenue. Secured bicycle parking facilities within the Project Site would also be provided. These measures would promote active transportation modes such as biking and walking, thereby reducing the Project VMT per capita for residents and employees compared to the average for the area, as demonstrated in Section 4B. Further, the Project does not propose modifying, removing, or otherwise affecting existing bicycle infrastructure, and the Project driveway is not proposed along a street with an existing bicycle facility.

Thus, the Project would be consistent with the goals of the Mobility Plan.

Plan for a Healthy Los Angeles

Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan (LADCP, March 2015) (Plan for a Healthy Los Angeles) introduces guidelines for the City to follow to enhance the City's position as a regional leader in health and equity, encourage healthy design and equitable access, and increase awareness of equity and environmental issues.

A detailed analysis of the Project's consistency with Plan for a Healthy Los Angeles is provided in Table 7. The Project prioritizes safety and access for all individuals utilizing the site by complying with all ADA requirements and providing direct connections to pedestrian amenities along Olympic Boulevard. Further, the Project supports healthy lifestyles by providing bicycle amenities and enhancing the pedestrian environment by providing shade trees, wider pedestrian paths, and landscaping for a more comfortable and inviting environment for pedestrians.

Thus, the Project would be consistent with the goals of *Plan for a Healthy Los Angeles*.

LAMC Section 12.21.A.16 (Bicycle Parking)

LAMC Section 12.21.A.16 details the bicycle parking requirements for new developments. As further detailed in Section 5E, the Project would provide a total of 24 short-term and 48 long-term spaces to satisfy the LAMC requirements for on-site bicycle parking supply.

LAMC Section 12.26J Transportation Demand Management (TDM) Ordinance

LAMC Section 12.26J, the TDM Ordinance (1993) establishes TDM requirements for non-residential projects, in addition to non-residential components of the mixed-use projects in excess of 25,000 sf. The Project is a senior residential development; therefore, the requirements of LAMC Section 12.26J do not apply to the Project.

Vision Zero Action Plan / Vision Zero Corridor Plans

Vision Zero implements projects that are designed to increase safety on the most vulnerable City streets. The City has identified street segments as part of the HIN where City projects will be targeted. The Project Site is not located along an HIN, and no Vision Zero safety improvements are planned adjacent to the Project Site.

Nonetheless, the Project improvements to the pedestrian environment would not preclude future Vision Zero safety improvements by the City. Thus, the Project does not conflict with Vision Zero.

Streetscape Plans

There are no streetscape plans adjacent to the Project Site and, therefore, streetscape plans do not apply to the Project.

Citywide Design Guidelines for Residential, Commercial, and Industrial Development

Citywide Design Guidelines (Los Angeles City Planning Urban Design Studio, October 2019) identifies urban design principles to guide architects and developers in designing high-quality projects that meet the City's functional, aesthetic, and policy objectives and help foster a sense of community. Specifically, *Citywide Design Guidelines* recommends a "Pedestrian-First Design" approach organized around the following guidelines:

- Guideline 1: Promote a safe, comfortable, and accessible pedestrian experience for all.
- Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.
- Guideline 3: Design projects to actively engage with streets and public space and maintain human scale.

As detailed in Table 8, the Project design includes pedestrian connections and bicycle amenities throughout the Project Site. In addition, adequate sidewalks would be provided, in accordance with the City's Living Streets design considerations. Trees and sidewalk plantings would be

incorporated to provide adequate shade and habitat and provide a more comfortable mobility environment for pedestrians. In addition, vehicular access to the Project Site would be provided separately from the pedestrian and bicycle access points. Thus, the Project design approach would align with the Pedestrian-First Design approach of *Citywide Design Guidelines* to provide a safe, comfortable, and accessible experience for all transportation modes.

CUMULATIVE ANALYSIS

In addition to potential Project-specific impacts, the TAG requires that the Project be reviewed in combination with nearby Related Projects to determine if there may be a cumulatively significant impact resulting from inconsistency with a particular program, plan, policy, or ordinance. In accordance with the TAG, the cumulative analysis must include consideration of any Related Projects within 0.5 miles of the Project Site and any transportation system improvements in the vicinity.

Similar to the Project, the Related Projects, identified in Table 4, would be individually responsible for complying with relevant plans, programs, ordinances, or policies addressing the circulation system. The Project, together with the Related Projects, would not result in cumulative impacts with respect to consistency with each of the plans, ordinances, or policies reviewed. The Project and the Related Projects do not interfere with any of the general policy recommendations and/or pilot proposals and, therefore, there would be no significant Project impact or cumulative impact.

TABLE 6
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	**Analysis of Project Consistency**
Chapter 1 - Safety First	
Policy 1.1, Roadway User Vulnerability Design, plan, and operate streets to prioritize the safety of the most vulnerable roadway user.	**Consistent.** Access to the Project Site would be provided via one full-access driveway on Bellwood Avenue. Additionally, the portion of Bellwood Avenue that currently bifurcates the Project Site would be vacated and realigned, with through public access maintained from both sides of Bellwood Avenue. Separate pedestrian access would be provided via entrances on Bellwood Avenue. Bicyclists would have the same access opportunities as pedestrians.
Policy 1.6 Multi-Modal Detour Facilities Design detour facilities to provide safe passage for all modes of travel.	**Consistent.** Construction activities associated with the new building and on-site improvements would be maintained on-site. Any temporary impediments to the public right-of-way would be addressed with implementation of the Construction Management Plan.
Chapter 2 - World Class Infrastructure	
Policy 2.2 Complete Streets Design Guide Establish the Complete Streets Design Guide as the City's document to guide the operations and design of streets and other public rights-of-way.	**Consistent.** As part of the Project, Bellwood Avenue would be improved with consideration of the safety of all users, including pedestrians, bicyclists, and vehicles.
Policy 2.3 Pedestrian Infrastructure Recognize walking as a component of every trip, and ensure high-quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.	**Consistent.** While this is a Citywide policy, the Project would support its implementation. The realignment of Bellwood Avenue would maintain pedestrian access on both sides of Bellwood Avenue. Streetscape amenities, such as new street trees on Bellwood Avenue and pedestrian-scale lighting fixtures and elements would enhance the pedestrian experience. In addition, the Project would provide improvements to the sidewalks with wider widths along portions of Bellwood Avenue. The Project would also include a bistro courtyard and lobby, providing an active ground floor with pedestrian friendly improvements.
Policy 2.4 Neighborhood Enhanced Network Provide a slow speed network of locally serving streets.	**Consistent.** No access to the Project Site is provided along street segments identified in the Neighborhood Enhanced Network, thereby ensuring that minimum Project traffic would not interfere with the neighborhood character of the surrounding area. In addition, as part of the Project, the portion of Bellwood Avenue that travels through the Project Site would be vacated and realigned. Through public vehicular and pedestrian access would be maintained from both sides of Bellwood Avenue, and a vehicle turn-out adjacent to the building's lobby entrance would be provided along with sidewalk and streetscape improvements. Thus, Bellwood Avenue would continue to serve as a slow speed local street (i.e., 15 to 20 miles per hour).

Notes:

[a] Objectives, Policies, Programs, or Plans based on information provided in *Mobility Plan 2035: An Element of the General Plan* (Los Angeles Department of City Planning, January 2016).

TABLE 6 (cont.)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	**Analysis of Project Consistency**
Policy 2.5 Transit Network Improve the performance and reliability of existing and future bus service.	**Consistent.** While this is a Citywide policy, the Project would support its implementation. The Project would result in a net reduction in trips. As such, the Project demand for transit service would not exceed the regional transit system capacity. Thus, the Project would not cause the capacity of the transit system to be substantially exceeded.
Policy 2.6 Bicycle Networks Provide safe, convenient, and comfortable local and regional bicycling facilities for people of all types and abilities. (includes scooters, skateboards, rollerblades, etc.)	**Consistent.** While this is a Citywide policy, the Project would support its implementation. The Project Site is not located adjacent to any roadways designated within the Bicycle Lane Network. In addition, Project visitors and employees arriving by bicycle would have the same access opportunities as pedestrian visitors, with access to the Project Site via improved sidewalks along the realigned Bellwood Avenue, as well as internal pathways with access to the central courtyard and lobby entrances. The Project provides both long-term and short-term bicycle parking amenities.
Policy 2.7 Vehicle Network Provide vehicular access to the regional freeway system.	**Consistent.** This is a citywide policy that does not apply to the Project because no changes to regional access are proposed as part of the Project. Vehicular access to the Project Site would be provided via Bellwood Avenue. Regional access to the Project Site would continue to be provided via Olympic Boulevard to Santa Monica Boulevard, I-10, and I-405.
Policy 2.10 Loading Areas Facilitate the provision of adequate on and off-street loading areas.	**Consistent.** An entry motor court/vehicle turn-out area would be provided along Bellwood Avenue adjacent to the Project Site and would be located adjacent to the lobby area. Access to the subterranean parking would occur from one entry/exit driveway located along Bellwood Avenue near the northern boundary of the building. A separate service driveway, providing access to the loading area, would be located on Bellwood Avenue adjacent to the parking entry/exit driveway.
Chapter 3 - Access for All Angelenos	
Policy 3.1 Access for All Recognize all modes of travel, including pedestrian, bicycle, transit, and vehicular modes – including goods movement – as integral components of the City's transportation system.	**Consistent.** The Project encourages multi-modal transportation alternatives and access for all travel modes to and from the Project Site. The Project provides a entry motor court/vehicle turn-out area adjacent to the Project lobby entrance along the realigned portion of Bellwood Avenue. The Project also provides infrastructure (enhanced sidewalks, short- and long-term bicycle parking, easy bicycle accessibility to the Project Site) to encourage walking and bicycling.
Policy 3.2 People with Disabilities Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.	**Consistent.** The Project's vehicular and pedestrian entrances would be designed in consideration of LADOT standards and would comply with Americans with Disabilities Act (ADA) requirements. The Project design would also be in compliance with all ADA requirements and would provide direct connections to pedestrian amenities at adjacent intersections.

Notes:

[a] Objectives, Policies, Programs, or Plans based on information provided in *Mobility Plan 2035: An Element of the General Plan* (Los Angeles Department of City Planning, January 2016).

TABLE 6 (cont.)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	**Analysis of Project Consistency**
Policy 3.5 Multi-Modal Features Support "first-mile, last-mile solutions" such as multi-modal transportation services, organizations, and activities in the areas around transit stations and major bus stops (transit stops) to maximize multi-modal connectivity and access for transit riders.	**Consistent.** The Project would provide enhanced sidewalks and bicycle parking amenities to promote multi-modal connectivity.
Policy 3.8 Bicycle Parking Provide bicyclists with convenient, secure, and well-maintained bicycle parking facilities.	**Consistent.** The Project would provide short-term and long-term bicycle parking within the Project Site that would satisfy the LAMC requirement.
Chapter 4 - Collaboration, Communication, & Informed Choices	
Policy 4.5 Improved Communication Facilitate communications between citizens and the City in reporting on and receiving responses to non-emergency street improvements.	**Consistent.** As part of the Project's Construction Management Plan, advance notification to the adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of construction, would be provided.
Policy 4.8 Transportation Demand Management Strategies Encourage greater utilization of Transportation Demand Management (TDM) strategies to reduce dependence on single-occupancy vehicles.	**Consistent.** The Project would implement Project design features to promote and provide employees, residents, and visitors with opportunities to utilize alternative transportation modes, including enhanced sidewalks and bicycle parking facilities.
Policy 4.13 Parking and Land Use Management Balance on-street and off-street parking supply with other transportation and land use objectives.	**Consistent.** The Project would provide sufficient off-street parking to accommodate the Project.
Policy 4.14 Wayfinding Provide widespread, user-friendly information about mobility options and local destinations, delivered through a variety of channels including traditional signage and digital platforms.	**Consistent.** The Project would incorporate illumination for parking, signage, and security purposes.

Notes:

[a] Objectives, Policies, Programs, or Plans based on information provided in *Mobility Plan 2035: An Element of the General Plan* (Los Angeles Department of City Planning, January 2016).

TABLE 6 (cont.)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	**Analysis of Project Consistency**
Chapter 5 - Clean Environments & Healthy Communities	
Policy 5.1 Sustainable Transportation Encourage the development of a sustainable transportation system that promotes environmental and public health.	**Consistent.** The Project would provide bicycle and pedestrian facilities and connections throughout the Project Site.
Policy 5.2 Vehicle Miles Traveled (VMT) Support ways to reduce vehicle miles traveled (VMT) per capita.	**Consistent.** The Project would incorporate Project design features to provide residents, employees, and visitors the opportunity to utilize alternative transportation modes to reduce VMT by reducing the number of single occupancy vehicle trips to the Project Site.
Policy 5.4 Clean Fuels and Vehicles Continue to encourage the adoption of alternative fuels, new mobility technologies, and supporting infrastructure.	**Consistent.** The Project comply with the City requirements for providing electric vehicle charging stations within the proposed parking area, thus, incorporating Project design features to provide residents, employees, and visitors the opportunity to utilize alternative fuels and new mobility technology.

Notes:

[a] Objectives, Policies, Programs, or Plans based on information provided in *Mobility Plan 2035: An Element of the General Plan* (Los Angeles Department of City Planning, January 2016).

TABLE 7
PROJECT CONSISTENCY WITH PLAN FOR A HEALTHY LOS ANGELES

Objective, Policy, Program, or Plan [a]	**Analysis of Project Consistency**
Chapter 1 - Los Angeles, a Leader in Health and Equity	
Policy 1.5 Plan for Health Improve Angelenos' health and well-being by incorporating a health perspective into land use, design, policy, and zoning decisions through existing tools, practices, and programs.	**Consistent.** The Project would include bicycle amenities and enhance pedestrian access within and around the Project Site by providing improvements to the sidewalks and landscaping within and along the Project perimeter.
Chapter 2 - A City Built for Health	
Policy 2.8 Basic Amenities Promote increased access to basic amenities, which include public restrooms and free drinking water in public spaces, to support active living and access to health-promoting resources.	**Consistent.** The Project would provide open space (14,630 sf) to support active living.
Chapter 5 - An Environment Where Life Thrives	
Policy 5.7 Land Use Planning for Public Health and GHG Emission Reduction Promote land use policies that reduce per capita greenhouse gas emissions, result in improved air quality and decreased air pollution, especially for children, seniors and others susceptible to respiratory diseases.	**Consistent.** The Project would incorporate bicycle and pedestrian amenities to the residents, employees, and visitors to promote alternative transprotation modes, thus, reducing green house gas emissions.

Notes:

[a] Objectives, Policies, Programs, or Plans based on information provided in *Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan* (Los Angeles Department of City Planning, March 2015).

TABLE 8
PROJECT CONSISTENCY WITH CITYWIDE DESIGN GUIDELINES

Objective, Policy, Program, or Plan [a]	**Analysis of Project Consistency**
Pedestrian-First Design	
Guideline 1: Promote a safe, comfortable, and accessible pedestrian experience for all Design projects to be safe and accessible and contribute to a better public right-of-way for people of all ages, genders, and abilities, especially the most vulnerable - children, seniors, and people with disabilities. **Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience** Design to avoid pedestrian and vehicular conflicts and to create an inviting and comfortable public right-of-way. A pleasant and welcoming public realm reinforces walkability and improves the quality of life for users. **Guideline 3: Design projects to actively engage with streets and public space and maintain human scale** New projects should be designed to contribute to a vibrant and attractive public realm that promotes a sense of civic pride. Better connections within the built environment contribute to a livable and accessible city and a healthier public realm.	**Consistent.** The Project design includes accessible sidewalks, pedestrian amenities, and a well-designed vehicular access driveway in accordance with the City's design considerations. The Project would provide street trees uniformly within the sidewalk to provide adequate shade, as well as a more comfortable environment for pedestrians. Further, the orientation of the Project design ensures that the Project actively engages with the street and its surrounding uses. The Project driveways would be designed and placed in accordance with City standards so as to not disrupt pedestrian flow on the adjacent sidewalks.

Notes:

[a] Objectives, Policies, Programs, or Plans based on information provided in the Citywide Design Guidelines (Los Angeles Department of City Planning, 2019).

Section 4B: Threshold T-2.1
Causing Substantial VMT Analysis

Threshold T-2.1 states that a residential project would result in a significant VMT impact if it cannot meet the household VMT per capita threshold of 15% below the existing average household VMT per capita for the Area Planning Commission (APC) area in which a project is located. Similarly, a commercial project would result in a significant VMT impact if it cannot meet the work VMT per employee threshold of 15% below the existing average work VMT per employee for the APC area in which the project is located.

Per Section 2.2.2 of the TAG, a "no impact" determination can be made for a project if either of the following screening criteria are not met for Threshold T-2:

- *T-2.1-1: Would the land use project generate a net increase of 250 or more daily vehicle trips?*
- *T-2.1-2: Would the project generate a net increase in daily VMT?*

PROJECT VMT ANALYSIS

The Project's land uses and their respective sizes were utilized as the primary input to the VMT Calculator.

The VMT Calculator does not include eldercare facility as a land use option. Therefore, in consultation with LADOT, a custom land use input was developed based on published trip generation rates in *Trip Generation Manual, 10th Edition* and a review of comparable land uses available in the VMT Calculator.

Application of the VMT Calculator showed that the Project is expected to generate a net reduction of 75 daily trips. Therefore, a "no impact" determination can be made for the Project, and no mitigation measures would be required.

The detailed screening output from the VMT Calculator is provided in Appendix D.

CUMULATIVE ANALYSIS

Cumulative effects of development projects are determined based on consistency with the air quality and GHG reduction goals of *Connect SoCal – The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy* (Southern California Association of Governments, Adopted September 2020) (RTP/SCS) in terms of development location, density, and intensity. The RTP/SCS presents a long-term vision for the region's transportation system through Year 2045 and balances the region's future mobility and housing needs with economic, environmental, and public health goals.

As detailed in the TAG, for projects that do not demonstrate an impact by applying an efficiency-based impact threshold (i.e., household VMT per capita or work VMT per employee) in the project impact analysis, a less than significant impact conclusion is sufficient in demonstrating there is no cumulative VMT impact, as those projects are already shown to align with the long-term VMT and GHG goals of the RTP/SCS. The Project would not result in a significant VMT impact, as described above. Therefore, the Project would not result in a cumulative VMT impact under Threshold T-2.1, and no further evaluation or mitigation measures would be required.

Section 4C: Threshold T-2.2

Substantially Inducing Additional Automobile Travel Analysis

The intent of Threshold T-2.2 is to assess whether a transportation project would induce substantial VMT by increasing vehicular capacity on the roadway network, such as the addition of through traffic lanes on existing or new highways, including general purpose lanes, high-occupancy vehicle lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges.

As part of the development of the proposed eldercare facility, the Project includes the vacation and realignment of the portion of Bellwood Avenue that currently bifurcates the Project Site. The realigned Bellwood Avenue would continue to serve the Project Site and would not increase vehicular capacity on the roadway network. The proposed improvement is not a transportation project that would induce automobile travel. Therefore, the Project would not result in a significant impact under Threshold T-2.2 and no further evaluation is required.

Section 4D: Threshold T-3

Substantially Increasing Hazards Due to a Geometric Design Feature or Incompatible Use Analysis

Threshold T-3 requires that a project undergo further evaluation if it proposes new driveways or new vehicle access points to the property from the public ROW or modifications along the public ROW (i.e., street dedications). Project access plans were reviewed to determine if the Project would substantially increase hazards due to geometric design features, including safety, operational, or capacity impacts, with consideration to the following factors: (1) the relative amount of pedestrian activity at Project access points; (2) design features/physical configurations that affect the visibility of pedestrians and bicyclists to drivers entering and exiting the site and the visibility of cars to pedestrians and bicyclists; (3) the type of bicycle facilities the project driveway(s) crosses and the relative level of utilization; (4) the physical conditions of the site and surrounding area, such as curves, slopes, walks, landscaping or other barriers that could result in vehicle/pedestrian, vehicle/bicycle, or vehicle/vehicle impacts; (5) the Project location, or Project-related changes to the public ROW, relative to proximity to the HIN or a Safe Routes to School program area; (6) and any other conditions, including the approximate location of incompatible uses that would substantially increase a transportation hazard.

PROJECT ACCESS REVIEW

Driveway Design Features

Vehicular access to the Project Site would be provided along Bellwood Avenue from Olympic Boulevard. The portion of Bellwood Avenue that bifurcates the Project Site would be vacated and realigned as a private street; however, through public and vehicular access would be maintained from both sides of Bellwood Avenue and to/from Olympic Boulevard. Access to the subterranean parking levels would be provided via a driveway along Bellwood Avenue near the northern boundary of the Project Site. A separate service driveway along Bellwood Avenue would be provided adjacent to the driveway to the subterranean parking garage. The driveways would be

placed to provide an adequate pedestrian refuge area between the two driveways. In addition, a vehicular turn-out/motor court would be provided adjacent to the building's lobby entrance.

The driveways and vehicular motor court would be placed along the realigned portion of Bellwood Avenue and would be designed and located at a distance from Olympic Boulevard to limit queue spillovers into the public ROW and interruptions to pedestrian flow and safety. Thus, the Project's driveways would not substantially increase vehicle-vehicle conflicts and would not present any geometric design hazards as it relates to traffic movement.

Pedestrian and Bicycle Activity

The Project would widen portions of the adjacent sidewalks along Bellwood Avenue to create a walkable and attractive pedestrian environment. In addition, paved walkways would be provided internal to the Project Site with access to and from Bellwood Avenue.

Currently, there are no bicycle facilities adjacent to the Project frontage. Within the Study Area, Avenue of the Stars, Pico Boulevard, and Beverly Glen Boulevard north of Santa Monica Boulevard have been identified as part of the BLN. Based on existing intersection volume data collected in April 2019, it was observed that Olympic Boulevard carries fewer than 13 bicycles during the entire span of the six-hour commuter peak periods (7:00 to 10:00 AM and 3:00 to 6:00 PM), as detailed in Appendix B. Therefore, given the minimal bicycle traffic, the driveways would not pose a safety hazard to bicyclists.

Physical Terrain

The Project's design integrates with the sloping topography of the surrounding area. The driveway design would not restrict sight lines, allowing drivers to safely identify approaching vehicles, pedestrians, and bicycles before committing to turn. Driveways are designed to intersect Bellwood Avenue at right angles to allow pedestrians and bicyclists to observe vehicles within the driveways.

The Project would provide private and public open space, landscaped elements, and street trees for shade along the Project perimeter and within the Project Site to create a walkable and attractive pedestrian environment. Pedestrian sidewalks would be improved to provide continuous pedestrian connections on Bellwood Avenue to Olympic Boulevard along the Project frontage.

Project Location

The Project Site is not located adjacent to a street identified as part of the HIN. Additionally, the Safe Routes to School map does not identify any infrastructure improvement projects within the Study Area.

As previously noted, the portion of Bellwood Avenue that bifurcates the Project Site would be vacated and realigned. Through public access would be maintained from both sides of Bellwood Avenue, and the Project would improve the realigned portion of Bellwood Avenue to provide sidewalks on both sides and a 28-foot roadway.

Incompatible Uses

The Project design incorporates and expands on the surrounding areas to provide a more attractive, well-defined, and accessible interaction between the Project and the adjacent uses. None of the Project design elements that are tangential to the adjacent uses are considered incompatible. There are no unusual or new obstacles that would be considered hazardous to motorized vehicles, non-motorized vehicles, or pedestrians.

Summary

Based on the site plan review and design assumptions, the Project does not present any geometric design hazards related to mobility or pedestrian accessibility.

CUMULATIVE ANALYSIS

None of the Related Projects identified in Table 4 provide access along the same block as the Project. Thus, the Project and Related Projects would not result in a cumulative impact under Threshold T-3.

Section 4E
Freeway Safety Analysis

LADOT has issued *Interim Guidance for Freeway Safety Analysis* (LADOT, May 1, 2020) (City Freeway Guidance) identifying City requirements for a CEQA safety analysis of Caltrans freeway facilities as part of a transportation assessment.

ANALYSIS METHODOLOGY

The City Freeway Guidance relates to the identification of potential safety impacts at freeway off-ramps as a result of increased traffic from development projects. It provides a methodology and significance criteria for assessing whether additional vehicle queueing at off-ramps could result in a safety impact due to speed differentials between the mainline freeway lanes and the queued vehicles at the off-ramp.

Based on the City Freeway Guidance, a transportation assessment for a development project must include analysis of any freeway off-ramp where the project adds 25 or more peak hour trips. The project would result in a significant impact at such a ramp if each of the following three criteria were met:

1. Under a scenario analyzing future conditions upon project buildout, with project traffic included, the off-ramp queue would extend to the mainline freeway lanes[3].
2. The project would contribute at least two vehicle lengths (50 feet, assuming 25 feet per vehicle) to the queue.
3. The average speed of mainline freeway traffic adjacent to the off-ramp during the analyzed peak hour(s) is greater than 30 mph.

[3] If an auxiliary lane is provided on the freeway, then half the length of the auxiliary lane is added to the ramp storage length.

Should a significant impact be identified, mitigation measures to be considered include TDM measures to reduce the project's trip generation, investments in active transportation or transit system infrastructure to reduce the project's trip generation, changes to the traffic signal timing or lane assignments at the ramp intersection, or physical changes to the off-ramp. Any physical change to the ramp would have to improve safety, not induce greater VMT, and not result in secondary environmental impacts.

FREEWAY SAFETY ANALYSIS

Based on the Project's trip generation estimates and traffic distribution pattern detailed in Chapter 3, which was reviewed and approved by LADOT as part of the Project's MOU, the Project would not add 25 or more peak hour trips to any freeway off-ramp. Therefore, no freeway off-ramp analysis is required, and the Project satisfies the City requirements for a freeway safety analysis of Caltrans facilities.

Chapter 5

Non-CEQA Transportation Analysis

This chapter summarizes the non-CEQA transportation analysis of the Project. It includes sections related to Project traffic, proposed access provisions, safety, and circulation operations, as well as pedestrian, bicycle, and transit facilities in the vicinity of the Project. This chapter also evaluates the Project's operational conditions, parking supply and requirements, and effects due to Project construction.

Per Section 3.1 of the TAG, any deficiencies identified based on the non-CEQA transportation analysis is "not intended to be interpreted as thresholds of significance, or significance criteria for purposes of CEQA review unless otherwise specifically identified in Section 2." Section 3 of the TAG identifies the following four non-CEQA transportation analyses for reviewing potential transportation deficiencies that may result from a development project:

- Pedestrian, Bicycle, and Transit Access Assessment
- Project Access, Safety, and Circulation Evaluation
- Residential Street Cut-Through Analysis
- Project Construction

The four non-CEQA transportation analyses were reviewed in detail in Sections 5A-5D. In addition, a review of the proposed parking and the City's parking requirement for the Project is provided in Section 5E.

Section 5A

Pedestrian, Bicycle, and Transit Assessment

This section assesses the Project's potential effect on pedestrian, bicycle, and transit facilities in the vicinity of the Project Site.

Factors to consider when assessing a project's potential effect on pedestrian, bicycle, and transit facilities, include the following:

- Would the project directly or indirectly result in a permanent removal or modification that would lead to the degradation of pedestrian, bicycle, or transit facilities?
- Would a project intensify use of existing pedestrian, bicycle, or transit facilities?

EXISTING FACILITIES

Pedestrians and Bicycles

Adjacent to the Project Site, nine-foot wide sidewalks are provided along Bellwood Avenue. Curb ramps for ADA accessibility are provided at both ends of Bellwood Avenue at Olympic Boulevard. Figure 5 shows a map of commercial and institutional facilities within walking distance of the Project Site that could attract pedestrian activity.

No bicycle facilities are currently provided adjacent to the Project Site.

Transit

Although no bus stops are located adjacent to the Project Site, some public transit stops in the vicinity of the Project Site are equipped with shelters (for rain or shade) and/or benches. For example, along westbound Olympic Boulevard, the Big Blue Bus Route 5 bus stop provides

benches immediately west of Kerwood Avenue, but no shelter or benches immediately east of Beverly Glen Boulevard. Along eastbound Olympic Boulevard, the Big Blue Bus Route 5 bus stop provides both shelters and benches immediately west of Beverly Glen Boulevard and benches east of Century Park West.

INTENSIFICATION OF USE

The Project would result in additional pedestrian, bicycle, and transit activity in the vicinity of the Project Site. However, the Project would enhance the pedestrian environment by providing a more comfortable pedestrian experience by widening most of the adjacent sidewalks, as well as providing streetscape improvements. The Project would provide bicycle parking for employees, residents, and visitors in accordance with LAMC requirements. Furthermore, the Project is located within a 0.25-mile walking distance of a Big Blue Bus Route 5 bus stop along Olympic Boulevard at Kerwood Avenue that encourages the utilization of public transit. Overall, the Project would not result in the deterioration of any existing facilities serving pedestrians or bicyclists.

Although the Project (and other Related Projects) will cumulatively add transit ridership, as detailed in Table 2, the Study Area is served by several established transit routes. The Project is served by multiple bus lines operated by Big Blue Bus and Culver CityBus along Olympic Boulevard and Century Park West within the Study Area, as well as Santa Monica Boulevard. As shown in Table 3, the total residual capacity of the bus lines within a 0.25-mile walking distance of the Project Site during the morning and afternoon peak hours is approximately 660 additional riders during the morning peak hour and 636 additional riders during the afternoon peak hour. The Project is not expected to generate significant transit-trips during the morning and afternoon peak hour, respectively. Therefore, the adjacent transit capacity can easily accommodate the intensification of transit usage attributable to the Project without significantly absorbing excess capacity.

CONCLUSION

The Project would result in some intensification of pedestrian, bicycle, and transit activity in the vicinity of the Project Site. However, the Project would improve the adjacent pedestrian facilities

and promote a more comfortable environment for all users through adequate sidewalk widths, street trees, and enhanced pedestrian connections. The current transit infrastructure has adequate residual capacity to accommodate Project transit trips. The pedestrian, bicycle, and transit activity generated by the Project would not strain the transportation system dedicated to those modes.

Section 5B
Project Access and Circulation Assessment

This section summarizes the site access, safety, and circulation of the Project Site. It includes a quantitative evaluation of the Project's access and circulation operations, including the anticipated LOS at the study intersections and anticipated traffic queues.

PROJECT ACCESS

Vehicles

As previously detailed, the portion of Bellwood Avenue that bifurcates the Project Site would be vacated and realigned as a private street, as shown in Figure 1. Through public access from Olympic Boulevard from both sides of Bellwood Avenue would be maintained with development of the Project.

Vehicular access into the Project's subterranean parking garage would be provided via one full-access driveway along the realigned portion of Bellwood Avenue near the northern boundary of the Project Site. The driveway would be designed to LADOT standards and to minimize queue spillover into the adjacent public ROW. A separate service driveway, providing access to the loading area, would be located adjacent to the parking garage driveway. In addition, a vehicle turn-out area would be provided adjacent to the Project's lobby entrance.

Pedestrians and Bicycles

Pedestrian access to the Project Site would be provided via improved sidewalks along Bellwood Avenue. In addition, pathways would be provided internal to the Project Site with access to the central courtyard and lobby entrances.

The Project access locations would be designed to provide connectivity to adjacent pedestrian facilities to further protect pedestrian safety. The realigned portion of Bellwood Avenue and the Project driveways would be designed to maximize sight distance and safety for all travel modes.

Residents, visitors, and employees arriving by bicycle would have the same access opportunities as pedestrian visitors. In order to support and facilitate bicycle use to and from the Project Site, short-term and long-term bicycle parking spaces would be provided as detailed in Section 5E.

OPERATIONAL EVALUATION

Intersection operation conditions were evaluated for typical weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods. A total of eight signalized study intersections in the vicinity of the Project Site were selected for detailed transportation analysis in consultation with LADOT.

The following traffic conditions were developed and analyzed as part of this study:

- Existing with Project Conditions (Year 2019) – This analysis condition analyzes the potential intersection operating conditions that could be expected if the Project were built under existing conditions. In this analysis, the Project-generated traffic is added to the Existing Conditions.
- Future with Project Conditions (Year 2023) – This analysis condition analyzes the potential intersection operating conditions that could be expected if the Project were fully occupied in the projected buildout year. In this analysis, the Project-generated traffic is added to Future without Project Conditions (Year 2023).

Methodology

In accordance with the TAG, the intersection delay and queue analyses for the operational evaluation were conducted using the *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016) (HCM) methodology, which was implemented using Synchro software and signal timing worksheets from the City to analyze intersection operating conditions. The HCM signalized methodology calculates the average delay, in seconds, for each vehicle passing through the intersections. Table 9 presents a description of the LOS categories, which range from

excellent, nearly free-flow traffic at LOS A, to stop-and-go conditions at LOS F, for signalized intersections. The queue lengths were estimated using Synchro, which reports the 85th percentile queue length for signalized intersections, in feet. The reported queues are calculated using the HCM signalized and unsignalized intersection methodology.

LOS and queuing worksheets for each scenario are provided in Appendix E.

Existing with Project Conditions

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes described in Chapter 3 and shown in Figure 13 were added to the Existing morning and afternoon peak hour traffic volumes shown in Figure 7. The resulting volumes are illustrated in Figure 14 and represent Existing with Project Conditions, assuming Project operation under Existing Conditions.

Intersection LOS. Table 10 summarizes the results of the Existing and Existing with Project Conditions during the weekday morning and afternoon peak hours for the eight study intersections. As shown, five of the eight study intersections are anticipated to continue to operate at LOS D or better during both the morning and afternoon peak hours under Existing with Project Conditions. The remaining three study intersections are anticipated to continue to operate at LOS E or F during at least one of the analyzed peak hours.

Future with Project Conditions

All future adjustments, including cumulative traffic growth (i.e., ambient growth and Related Project traffic) and transportation infrastructure improvements described in Chapter 2 were incorporated into this analysis.

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes described in Chapter 3 and shown in Figure 13 were added to the Future without Project (Year 2023) morning and afternoon peak hour traffic volumes shown in Figure 10. The resulting volumes are illustrated in Figure 15 and represent Future with Project Conditions after development of the Project in Year 2023.

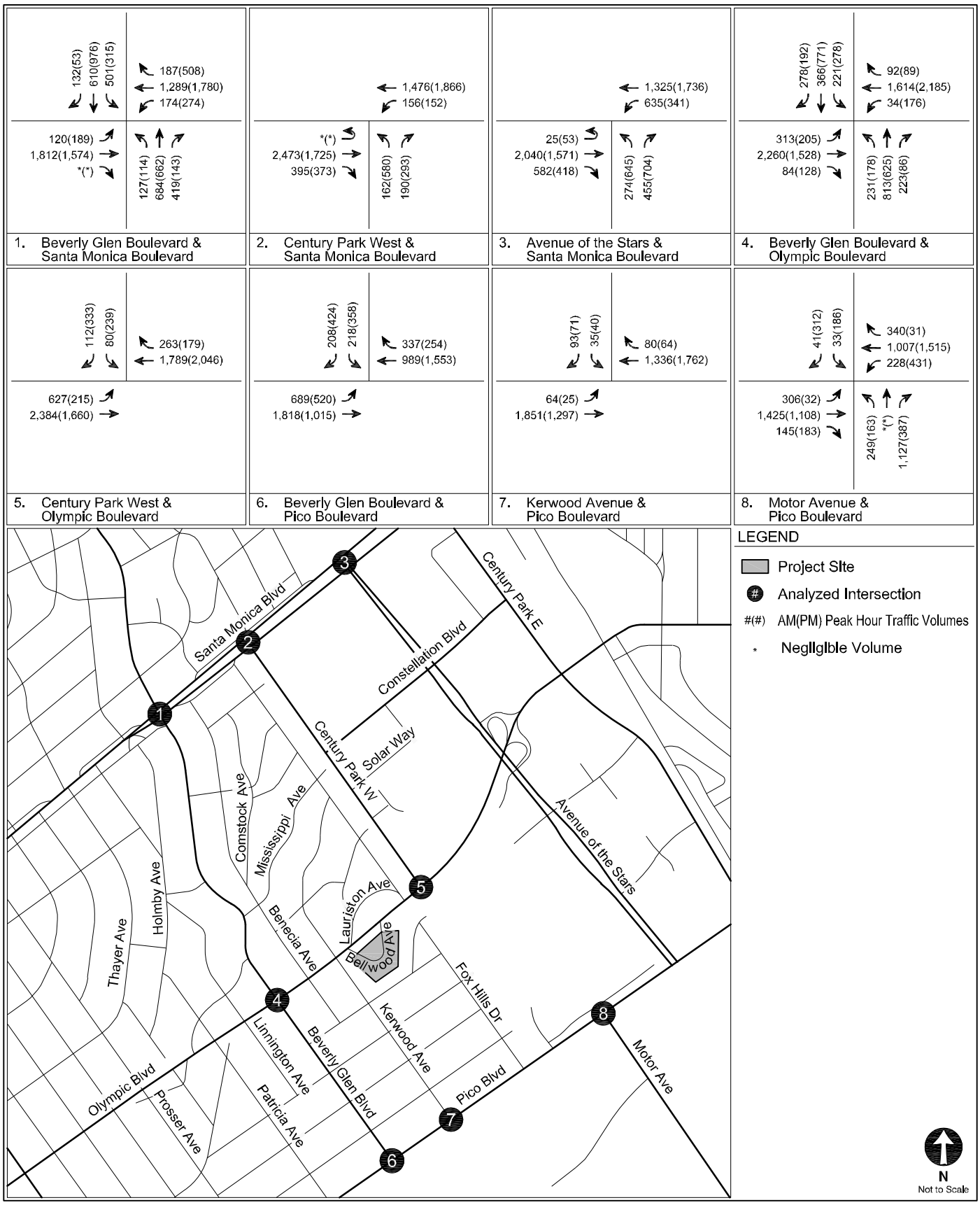
Intersection LOS. Table 11 summarizes the results of the Future without Project (Year 2023) and Future with Project Conditions during the weekday morning and afternoon peak hours for the eight study intersections. As shown, three of the eight study intersections are anticipated to operate at LOS D or better during both the morning and afternoon peak hours under Future with Project Conditions. The remaining five study intersections are anticipated to continue to operate at LOS E or F during at least one of the analyzed peak hours.

INTERSECTION QUEUING ANALYSIS

The study intersections, Project driveway on Bellwood Avenue, and intersections of Olympic Boulevard at both ends of Bellwood Avenue were analyzed to determine whether the lengths of intersection turning lanes were adequate to accommodate vehicle queue lengths.

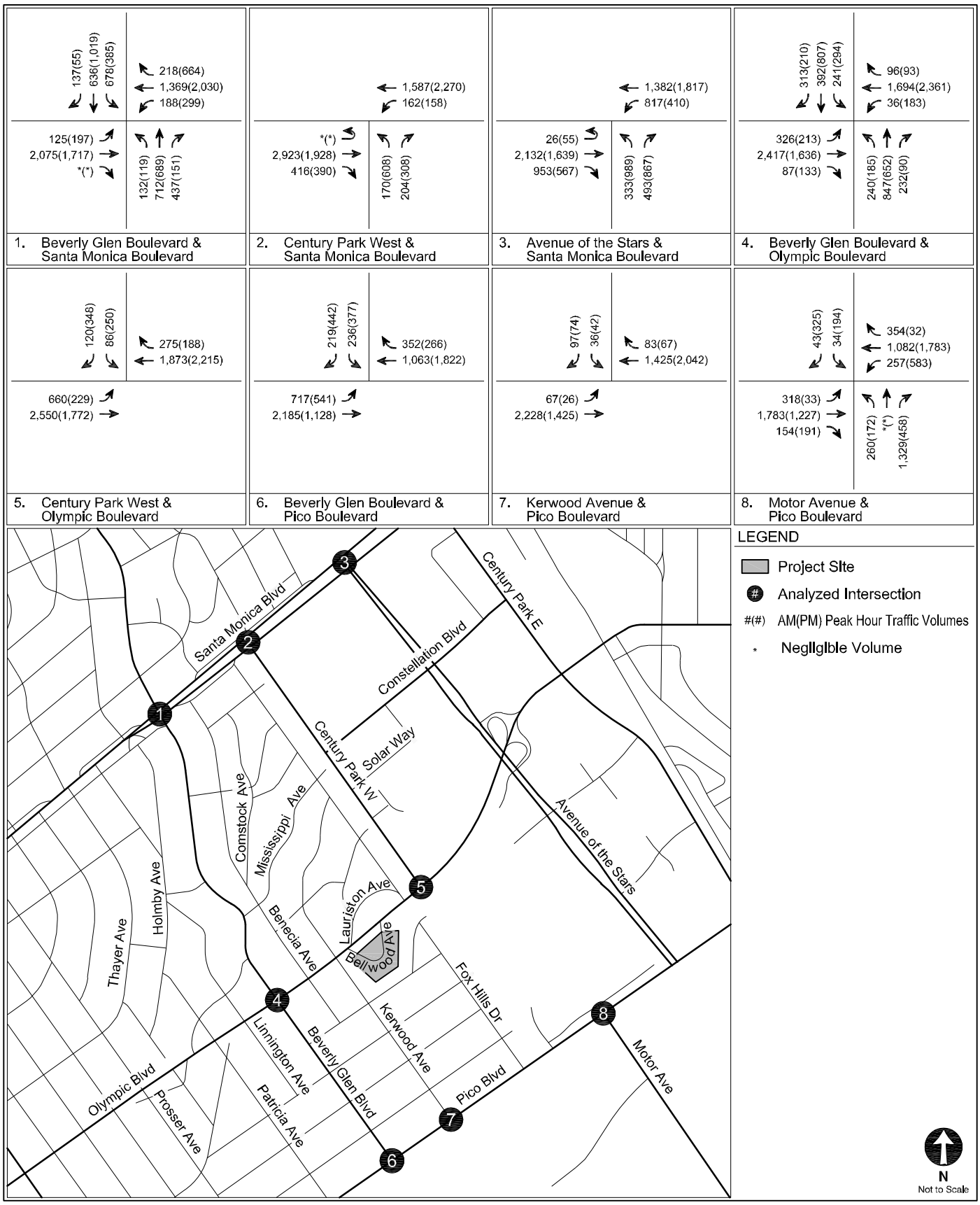
The queue lengths were estimated using Synchro software, which reports the 85th percentile queue length for signalized intersections at each approach lane and the 95th percentile queue length for unsignalized intersections. Synchro queue results reported in vehicle length were converted to feet by multiplying each vehicle by 25 feet to account for the average length of a vehicle plus the distances between vehicles in the queue. The reported queues were calculated using the HCM signalized and unsignalized intersection methodology.

Detailed queuing analysis worksheets are provided in Appendix E.



EXISTING WITH PROJECT CONDITIONS (YEAR 2019)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 14



FUTURE WITH PROJECT CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 15

TABLE 9
INTERSECTION LEVEL OF SERVICE

Level of Service	Description	Delay [a]	
		Signalized Intersections	Unsignalized Intersections
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	≤ 10	≤ 10
B	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	> 10 and ≤ 20	> 10 and ≤ 15
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 20 and ≤ 35	> 15 and ≤ 25
D	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	> 35 and ≤ 55	> 25 and ≤ 35
E	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 55 and ≤ 80	> 35 and ≤ 50
F	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	> 80	> 50

Notes
Source: *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016).
[a] Measured in seconds.

TABLE 10
EXISTING WITH PROJECT CONDITIONS (YEAR 2019)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Existing		Existing with Project	
			Delay	LOS	Delay	LOS
1.	Beverly Glen Boulevard &	AM	68.1	E	68.1	E
[a]	Santa Monica Boulevard	PM	56.9	E	56.8	E
2.	Century Park West &	AM	14.5	B	13.9	B
[a]	Santa Monica Boulevard	PM	22.3	C	22.1	C
3.	Avenue of the Stars &	AM	28.5	C	35.6	D
[a]	Santa Monica Boulevard	PM	27.2	C	34.0	C
4.	Beverly Glen Boulevard &	AM	94.1	F	94.4	F
[a]	Olympic Boulevard	PM	42.6	D	41.8	D
5.	Century Park West &	AM	31.3	C	31.3	C
[a]	Olympic Boulevard	PM	18.7	B	18.7	B
6.	Beverly Glen Boulevard &	AM	58.4	E	58.5	E
[a]	Pico Boulevard	PM	61.3	E	61.1	E
7.	Kerwood Avenue &	AM	11.6	B	11.5	B
[a]	Pico Boulevard	PM	7.5	A	7.5	A
8.	Motor Avenue &	AM	23.1	C	23.0	C
[a]	Pico Boulevard	PM	28.7	C	28.7	C

Notes
Delay is measured in seconds per vehicle
LOS = Level of service
[a] Signalized intersection analyzed based on the HCM Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

TABLE 11
FUTURE WITH PROJECT CONDITIONS (YEAR 2023)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
1.	Beverly Glen Boulevard &	AM	113.6	F	113.6	F
[a]	Santa Monica Boulevard	PM	88.4	F	88.5	F
2.	Century Park West &	AM	12.7	B	14.4	B
[a]	Santa Monica Boulevard	PM	23.7	C	23.6	C
3.	Avenue of the Stars &	AM	66.2	E	61.4	E
[a]	Santa Monica Boulevard	PM	33.4	C	31.8	C
4.	Beverly Glen Boulevard &	AM	117.1	F	117.3	F
[a]	Olympic Boulevard	PM	54.2	D	54.0	D
5.	Century Park West &	AM	39.6	D	39.4	D
[a]	Olympic Boulevard	PM	23.4	C	23.3	C
6.	Beverly Glen Boulevard &	AM	66.7	E	66.8	E
[a]	Pico Boulevard	PM	85.6	F	85.2	F
7.	Kerwood Avenue &	AM	21.5	C	14.3	B
[a]	Pico Boulevard	PM	7.9	A	7.9	A
8.	Motor Avenue &	AM	33.1	C	21.4	C
[a]	Pico Boulevard	PM	63.4	E	63.5	E

Notes
Delay is measured in seconds per vehicle
LOS = Level of service
[a] Signalized intersection analyzed based on the HCM Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

Section 5C

Residential Street Cut-Through Analysis

This section summarizes the residential street cut-through analysis for the Project. The residential street cut-through analysis determines potential increases in average daily traffic volumes on designated Local Streets, as classified in the Mobility Plan, that can be identified as cut-through trips generated by the Project and that can adversely affect the character and function of those streets.

Section 3.5.2 of the TAG provides a list of questions to assess whether the Project would negatively affect residential streets. The Project would generate a net reduction in daily trips and would not lead to trip diversion from the adjacent and nearby streets to alternative routes along a residential Local Streets that are not located adjacent to the Project Site; nor is the Project projected to add a substantial amount of automobile traffic to congested Arterial Streets that could potentially cause a shift to residential Local Streets; nor is there a nearby local residential street that provides a viable alternative route to the Project Site. Thus, the Project is not required to conduct a Local Residential Street Cut-Through Analysis.

Section 5D
Construction Analysis

This section summarizes the construction schedule and construction analysis for the Project, including the realignment of Bellwood Avenue and related improvements. The construction impact analysis relates to the temporary effects that may result from the construction activities associated with the Project and was conducted in accordance with Section 3.4 of the TAG.

CONSTRUCTION EVALUATION CRITERIA

Section 3.4.3 of the TAG identifies three types of in-street construction constraints that require further analysis to assess the effects of Project construction on the existing pedestrian, bicycle, transit, or vehicle circulation:

1. Temporary transportation constraints – potential effects on the transportation system
2. Temporary loss of access – potential effects on visitors entering and leaving sites
3. Temporary loss of bus stops or rerouting of bus lines – potential effects on bus travelers

The factors to be considered include the magnitude and duration of the temporary loss of access and transportation facilities, the potential inconvenience caused to users of the transportation system, and consideration for public safety. Construction activities could potentially interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas. As detailed in Section 3.4.4 of the TAG, the proposed construction plans should be reviewed to determine whether construction activities would require any of the following actions within the public ROW:

- Street, sidewalk, or lane closures
- Blocking of existing vehicle, bicycle, or pedestrian access along a street or to parcels fronting the street
- Modification of access to transit stations, stops, or facilities during revenue hours

- Closure or movement of an existing bus stop or rerouting of an existing bus line
- Creation of transportation hazards

PROPOSED CONSTRUCTION SCHEDULE

The Project is anticipated to be constructed over a period of approximately 34 months, with completion anticipated in Year 2023. Peak truck activity occurs during the excavation and grading activities and the mat foundation period, and peak worker activity occurs during the building finishes/architectural coatings phase. These phases of construction were studied in greater detail.

TRUCK ROUTES

Haul trucks would travel on approved truck routes designated within the City. Given the Project Site's proximity to I-10 and I-405, haul traffic would take the most direct route to the appropriate freeway ramps. The haul routes will be reviewed and approved by the City.

EXCAVATION AND GRADING PHASE

The peak period of haul truck activity during construction would occur during excavation and grading of the Project Site.

Based on projections compiled for the Project, approximately 74,800 cubic yards of material would be excavated and removed from the Project Site. Based on scheduling estimates, this would require up to 81 haul trucks per day. It is also anticipated that up to five delivery trucks would arrive to the Project Site per day during the excavation and grading phase. Thus, up to 172 daily truck trips (86 inbound, 86 outbound), including 162 daily haul truck trips and 10 daily delivery truck trips, are forecast to occur during the excavation and grading period[4]. Up to 26 trips per hour (13 inbound, 13 outbound) would occur during the hauling period.

[4] Based on input from the Project Applicant, a maximum of 13 haul trucks could be accommodated within a given hour. Thus, should haul trucks be limited to a six-hour period (9:00 AM to 3:00 PM), the 162 daily haul trucks estimate is conservative and overstated.

Large trucks were converted into the equivalent value of passenger cars due to the slower headway and delay-creating effects of heavy vehicles. Table 8 of *Transportation Research Circular No. 212, Interim Materials on Highway Capacity* (Transportation Research Board, 1980) and Exhibit 12-25 of the HCM suggest that a passenger car equivalency (PCE) of one truck is equal to 2.0 commuter vehicles. Assuming a PCE factor of 2.0, the 172 truck trips would be equivalent to 344 daily PCE trips. The 26 hourly truck trips would be equivalent to 52 PCE trips (26 inbound, 26 outbound) per hour.

In addition, a maximum of 30 daily construction worker trips (15 inbound and 15 outbound) to and from the Project Site are anticipated on a daily basis during the excavation and grading period.

With the implementation of the Construction Management Plan, which is described in more detail later in this chapter, it is anticipated that haul truck activity to and from the Project Site would occur outside of the morning and afternoon peak hours where feasible. In addition, as discussed in more detail in the following section, worker trips to and from the Project Site would also occur outside of the peak hours. Therefore, no peak hour construction traffic impacts are expected during the excavation and grading phase of construction.

MAT FOUNDATION PHASE

Peak truck activity during construction would occur during the mat foundation phase, when approximately 200 concrete trucks are anticipated to arrive to the Project Site[5]. Thus, up to 400 truck trips (200 inbound, 200 outbound) are forecast to occur during this period, or approximately 26 trips per hour (13 inbound, 13 outbound) over a typical 12-hour truck period. The mat foundation period is anticipated to occur over several days. Assuming a PCE factor of 2.0, the 400 truck trips would be equivalent to 800 daily PCE trips. The 26 hourly truck trips would be equivalent to 52 PCE trips (26 inbound, 26 outbound) per hour.

In addition, a maximum of 30 daily construction worker trips (15 inbound and 15 outbound) are anticipated to and from the Project Site during this phase.

[5] Based on input from the Project Applicant, a maximum of 13 concrete trucks could be accommodated at the Project Site within a given hour. As such, the estimate of 200 daily concrete trucks over a 12-hour period is conservative and overstated.

Consistent with the excavation and grading phase, with implementation of the Construction Management Plan, it is anticipated that truck activity to and from the Project Site and construction worker trips would occur outside of the morning and afternoon peak hours where feasible. Therefore, no peak hour construction traffic impacts are expected during the mat foundation period of construction.

BUILDING FINISHES/ARCHITECTURAL COATINGS PHASE

The traffic impacts associated with construction workers depends on the number of construction workers employed during various phases of construction, as well as the travel mode and travel time of the workers. In general, the hours of construction typically require workers to be on-site before the weekday morning commuter peak period and allow them to leave before the afternoon commuter peak period (i.e., arrive at the site prior to 7:00 AM and depart before 3:00 PM or after 6:00 PM). Therefore, most, if not all, construction worker trips would occur outside of the typical weekday commuter peak periods.

According to construction projections prepared for the Project, a maximum of 200 daily construction worker trips (100 inbound and 100 outbound trips) to and from the Project Site are anticipated during the building finishes/architectural coatings phase. Nearly all of those trips would occur outside of the peak hours, as described above. As such, the building phase of Project construction is not expected to cause a significant traffic impact at any of the study intersections.

During construction, adequate parking for construction workers would be secured on-site to the extent feasible or at an off-site parking facility within walking distance of the Project Site. Workers will be restricted from parking in the public ROW in the vicinity of (or adjacent to) the Project Site as part of the Construction Management Plan.

POTENTIAL IMPACTS ON ACCESS, TRANSIT, AND PARKING

Project construction is not expected to create hazards for roadway travelers, bus riders, or parkers, as long as commonly practiced safety procedures for construction are followed. Such procedures and other measures (e.g., to address temporary traffic control, lane closures, sidewalk

closures, etc.) will be incorporated into the Construction Management Plan. The construction-related impacts associated with access and transit are anticipated to be less than significant, and the implementation of the Construction Management Plan described below would further reduce those impacts.

Access

Construction activities associated with the new building and on-site improvements are expected to be primarily contained within the Project Site boundaries. However, construction activities related to the realignment of Bellwood Avenue would require a partial closure of Bellwood Avenue that would restrict through access for the duration of construction. The closure would occur within the Project Site and would only affect vehicular, pedestrian, and bicycle access to the Project Site. Access to Bellwood Avenue from Olympic Boulevard would remain open at both the east and west ends. Therefore, access to the adjacent hotel, residential, and commercial uses would be maintained and would not be impacted by construction activities of the Project. In addition, adequate fire access would also be maintained. Temporary traffic controls would be provided to direct traffic around any closures as required in the Construction Management Plan.

Transit and Parking

No bus stops are located adjacent to the Project Site. Therefore, no bus stop relocation or bus rerouting is required, and no temporary impacts to transit are expected. Project construction activities are anticipated to result in on-street parking removals along Bellwood Avenue. These on-street parking spaces serve the existing multi-family residential uses of the Project Site and are restricted to permit parking only at all times. These on-street parking spaces along Bellwood Avenue would not be re-installed with completion of the Project, as the future parking demand for the Project Site would be accommodated within the Project's on-site parking garage.

CONSTRUCTION MANAGEMENT PLAN

A detailed Construction Management Plan, including street closure information, a detour plan, haul routes, and a staging plan, would be prepared and submitted to the City for review, prior to commencing construction. The Construction Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements, as appropriate:

- Advance notification of adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation.
- Prohibition of construction work or equipment parking on adjacent streets.
- Temporary traffic control (e.g., flag persons) during construction activities adjacent to public ROW to improve traffic flow on public roadways, as appropriate.
- Containment of Project construction activity associated with the new building and on-site improvements within the Project Site boundaries.
- Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate.
- Scheduling of construction-related deliveries, haul trips, etc., so as to occur outside the commuter peak hours to the extent feasible.
- Spacing of trucks so as to discourage a convoy effect.
- Identification of a construction manager and provision of a telephone number for any inquiries or complaints from residents regarding construction activities. The telephone number shall be posted at the site readily visible to any interested party during site preparation, grading and construction.

It is likely that Construction Management Plans would also be submitted for approval to the City by the Related Projects prior to the start of construction activities. As part of the LADOT and/or Los Angeles Department of Building and Safety (LADBS) established review process of Construction Management Plans, potential overlapping construction activities and proposed haul routes would be reviewed to minimize the impacts of cumulative construction activities on any particular roadway.

Section 5E
Parking

This section provides an analysis of the proposed parking and the potential parking impacts of the Project.

PARKING SUPPLY

The Project proposes up to 140 vehicular parking spaces within two levels of subterranean parking. In addition, the Project would provide 72 bicycle parking spaces. The Project would comply with the City requirements for providing electric vehicle charging capabilities and stations within the parking facility.

VEHICLE PARKING CODE REQUIREMENTS

The parking requirements for the Project are based on rates provided in LAMC Section 12.21.A4(d)(5) for eldercare facilities. Additionally, as fully detailed in LAMC Section 12.21.A4(u), the parking requirement for senior independent living and assisted living uses may be reduced by 50% if the following criteria are met:

(1) Each dwelling unit or guest room is occupied by at least one person who is disabled or 62 years or older, except for management or maintenance staff.

(2) At least 10 sf of indoor recreation space and 50 sf of open space per dwelling unit are available and accessible to all residents.

Per LAMC Section 12.21.A4(u)(3), prior to the issuance of a building permit for construction, the Project would execute a covenant agreement that states if LADBS determines that the project does not qualify under criteria (1) above, the Project would, at the written request of LADBS, develop the additional parking spaces otherwise required for the Project.

As shown in Table 12, based on these Code requirements, the Project is required to provide a total of 81 vehicular parking spaces with application of the allowable reductions for senior independent living and assisted living uses. The parking requirements would be satisfied on-site as the Project would provide a minimum of 81 vehicular parking spaces.

BICYCLE PARKING CODE REQUIREMENTS

Table 13 summarizes the bicycle parking requirements for the Project per LAMC Section 12.21.A16(a)(1)(i), which states that short-term and long-term bicycle parking requirements for senior and eldercare housing, including independent living, assisted living, and memory care uses, are the same as institutional uses. There are distinct requirements for the number of long-term spaces and short-term spaces. Long-term spaces are for bicycle storage overnight or longer, while short-term spaces are more easily accessible as they are typically used for up to a few hours at a time. As shown in Table 13, the institutional use requires one long-term bicycle parking space per 10,000 sf and one short-term bicycle parking space per 5,000 sf.

As detailed in Table 13, the Project is required to provide a total of 72 (24 long-term and 48 short-term) bicycle parking spaces. The LAMC bicycle parking requirement would be satisfied on-site, and no significant bicycle parking impacts are anticipated.

TABLE 12
CODE VEHICLE PARKING REQUIREMENT

Land Use	Size	Code Requirement [a] [b]			Parking Required
Independent Living	71 units	0.5 spaces	/	1 unit	35 spaces
Assisted Living	75 rooms	0.5 spaces	/	1 room	37 spaces
Memory Care	46 beds	0.2 spaces	/	1 bed	9 spaces
				Total Code Required Parking	**81 spaces**

Notes
[a] Code requirements per Section 12.21A.4.(d)(5) of the LAMC for eledercare facilities.
[b] Per LAMC Section 12.21.A4(u), the code parking requirement for senior independent living and assisted living uses may be reduced by 50% if all of the following criteria are met:

(1) Each dwelling unit or guest room is occupied by at least one person that is disabled or 62 years or older, except for management or maintenance staff.
(2) At least 10 sf of indoor recreation space and 50 sf of open space for each dwelling unit are available and accessible to all residents.
(3) Prior to the issuance of a building permit for construction, if the Department of Building and Safety (DBS) determines that the project does not qualify under criteria (1), the project will, at the written request of DBS, develop the additional parking spaces otherwise required for the project.

TABLE 13
CODE BICYCLE PARKING REQUIREMENT

Type of Land Use	Units or Size	Long-Term Spaces	Short-Term Spaces
Los Angeles Municipal Code Requirement			
Institution [a]		1 space per 10,000 sf	1 space per 5,000 sf
Project Parking Requirement			
Independent Living, Assisted Living and Memory Care [b]	241,754 sf	24	48
	Total	**24**	**48**
	Total Bicycle Parking Requirement	**72**	

Notes
sf = square feet
[a] Bicycle parking requirements per LAMC Section 12.21.A16.
[b] Total floor area includes residential floor area, common area floor area, and corridors.

Chapter 6

Summary and Conclusions

This study was undertaken to analyze the potential transportation impacts of the Project on the local street system. The following summarizes the results of this analysis:

- The Project, located at 10328-10384 and 10341-10381 Bellwood Avenue, would develop a 192-unit eldercare facility consisting of 71 independent care units, 75 assisted living units, and 46 memory care units. The Project would replace 112 existing multi-family residential units. The Project would also vacate and realign the portion of Bellwood Avenue that bifurcates the Project Site, with through public access maintained from both sides.

- Access to the Project's two-level subterranean parking would be provided via one full-access driveway along Bellwood Avenue.

- The Project is anticipated to be complete in Year 2023 and is estimated to generate a net reduction of trips, including 16 fewer net morning peak hour trips and nine fewer net afternoon peak hour trips.

- The Project is consistent with the City's plans, programs, ordinances, and policies and would not result in geometric design hazard impacts.

- The Project does not meet the threshold criteria for requiring VMT analyses and would, therefore, not have VMT impacts.

- The Project would not cause a significant safety impact at any freeway off-ramp locations.

- The Project provides adequate internal circulation to accommodate vehicular, pedestrian, and bicycle traffic without impeding through traffic movements on City streets.

- The Project would incorporate pedestrian and bicycle-friendly designs, such as bicycle parking, adequate sidewalks, and street trees.

- All construction activities would occur outside of the commuter morning and afternoon peak hours to the extent feasible and will not result in significant traffic impacts. A Construction Management Plan would ensure that construction impacts are less than significant.

- The Project is in compliance with LAMC vehicle and bicycle parking requirements.

References

2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element, Los Angeles Department of City Planning, 2010.

CEQA Air Quality Handbook, South Coast Air Quality Management District, 1993.

Citywide Design Guidelines, Los Angeles City Planning Urban Design Studio, October 2019.

Connect SoCal – The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy, Southern California Association of Governments, September 2020.

Highway Capacity Manual, 6th Edition, Transportation Research Board, 2016.

Los Angeles Municipal Code, City of Los Angeles.

Mobility Plan 2035, An Element of the General Plan, Los Angeles Department of City Planning, September 2016.

Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan, Los Angeles Department of City Planning, March 2015.

State of California Senate Bill 743, Steinberg, 2013.

Transportation Assessment Guidelines, Los Angeles Department of Transportation, July 2020.

Transportation Research Circular No. 212, Interim Materials on Highway Capacity, Transportation Research Board, 1980.

Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017.

Vision Zero: Eliminating Traffic Deaths in Los Angeles by 2025, City of Los Angeles, August 2015.

West Los Angeles Transportation Improvement and Mitigation Specific Plan, Los Angeles Department of City Planning, 1997.

Appendix A

Memorandum of Understanding

LADOT

Transportation Impact Study Memorandum of Understanding (MOU)

This MOU acknowledges that the Transportation Impact Study for the following Project will be prepared in accordance with the latest version of LADOT's Transportation Impact Study Guidelines:

I. PROJECT INFORMATION

Project Name: Senior Residential Community at the Bellwood

Project Address: 10328-10384 and 10341-10381 Bellwood Avenue, Los Angeles, CA 90064

Project Description: The Project includes the development of a 192-unit eldercare facility consisting of 71 independent living units, 75 assisted living guest rooms, and 46 memory care guest rooms, as well as 50,463 square feet of ancillary general common areas and amenities for residents. Parking would be provided within two subterranean levels. The Project would replace 112 existing multi-family residential units on-site.

LADOT Project Case Number: WLA19-107979 Project Site Plan attached? *(Required)* ■ Yes ☐ No

II. TRIP GENERATION

Geographic Distribution: N 10.00 % S 15.00 % E 40.00 % W 35.00 %

Illustration of Project trip distribution percentages at Study intersections attached? *(Required)* ■ Yes ☐ No

Trip Generation Adjustments *(Exact amount of credit subject to approval by LADOT)*

	Yes	No
Transit Usage	☐	■
Transportation Demand Management	☐	■
Existing Active Land Use	■	☐
Previous Land Use	☐	■
Internal Trip	☐	■
Pass-By Trip	☐	■

Source of Trip Generation Rate(s)? ☐ ITE 9th Edition ■ Other: ITE 10th Edition , West LA TIMP

Trip generation table including a description of the proposed land uses, ITE rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. attached? *(Required)* ■ Yes ☐ No

	IN	OUT	TOTAL
AM Trips	10	-26	-16
PM Trips	-21	0	-21

III. STUDY AREA AND ASSUMPTIONS

Project Buildout Year: 2023 Ambient or CMP Growth Rate: 1 % Per Yr.

Related Projects List, researched by the consultant and approved by LADOT, attached? *(Required)* ■ Yes ☐ No

Map of Study Intersections attached? *(May be subject to LADOT revision after initial impact analysis)* ■ Yes ☐ No

Is this Project located on a street within the High Injury Network? ☐ Yes ■ No

IV. CONTACT INFORMATION

	CONSULTANT	DEVELOPER
Name:	Gibson Transportation Consulting, Inc.	SBLP Century City, LLC
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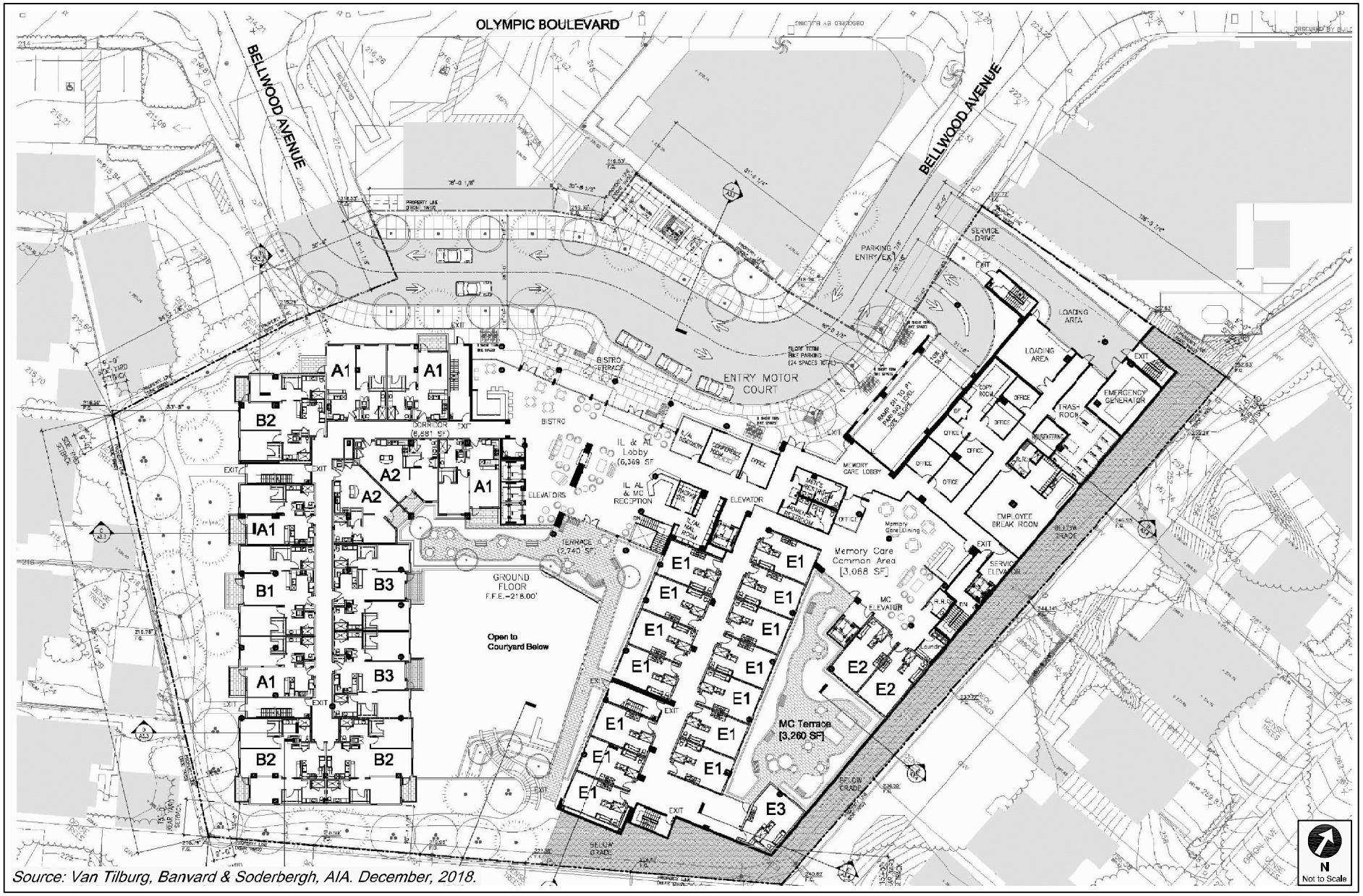
Approved by:	x	2/27/19	x	3/28/19
	Consultant's Representative	Date	LADOT Representative	Date



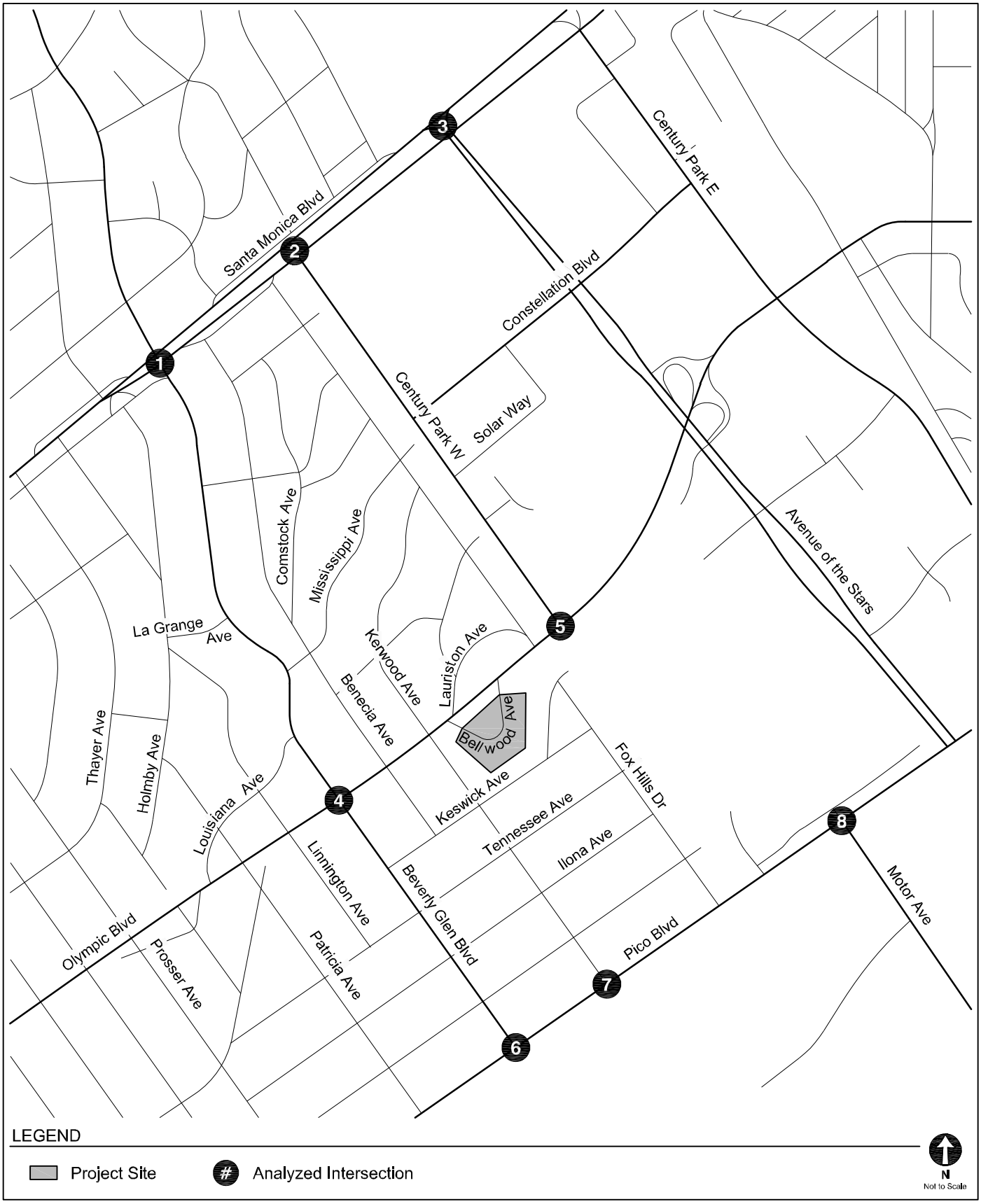
Source: Van Tilburg, Banvard & Soderbergh, AIA. December, 2018.

PROJECT SITE PLAN

FIGURE 1

TABLE 1
STUDY INTERSECTIONS

No.	North/South Street	East/West Street	Jurisdiction
1.	Beverly Glen Boulevard	Santa Monica Boulevard	City of Los Angeles / Caltrans
2.	Century Park W	Santa Monica Boulevard	City of Los Angeles / Caltrans
3.	Avenue of the Stars	Santa Monica Boulevard	City of Los Angeles / Caltrans
4.	Beverly Glen Boulevard	Olympic Boulevard	City of Los Angeles
5.	Century Park W	Olympic Boulevard	City of Los Angeles
6.	Beverly Glen Boulevard	Pico Boulevard	City of Los Angeles
7.	Kerwood Avenue	Pico Boulevard	City of Los Angeles
8.	Motor Avenue	Pico Boulevard	City of Los Angeles



STUDY AREA & ANALYZED INTERSECTIONS

FIGURE 2

TABLE 2
PROJECT TRIP GENERATION ESTIMATES

Land Use	ITE Land Use	Size	Daily	AM Peak Hour			PM Peak Hour [b]		
				In	Out	Total	In	Out	Total
Trip Generation Rates [a]									
Multifamily Housing (Low-Rise)	220	per du	7.32	23%	77%	0.46	63%	37%	0.49
Congregate Care Facility	253	per du	2.02	60%	40%	0.07	53%	47%	0.08
Assisted Living	254	per bed	2.60	63%	37%	0.19	38%	62%	0.17
Proposed Project									
Independent Living	253	71 du	143	3	2	5	3	3	6
Assisted Living [c]	254	99 beds	257	12	7	19	6	11	17
Memory Care [d]	254	46 beds	120	6	3	9	3	5	8
Subtotal Proposed Project Trips			**520**	**21**	**12**	**33**	**12**	**19**	**31**
Existing Uses to be Removed									
Multifamily Housing (Low-Rise)	220	112 du	820	12	40	52	35	20	55
Less Walk-In/Transit Reduction - 5% [e]			*(41)*	*(1)*	*(2)*	*(3)*	*(2)*	*(1)*	*(3)*
Subtotal - Existing Residential			**779**	**11**	**38**	**49**	**33**	**19**	**52**
TOTAL NET NEW PROJECT TRIPS			**(259)**	**10**	**(26)**	**(16)**	**(21)**	**0**	**(21)**

Notes

1,000 square feet = ksf.

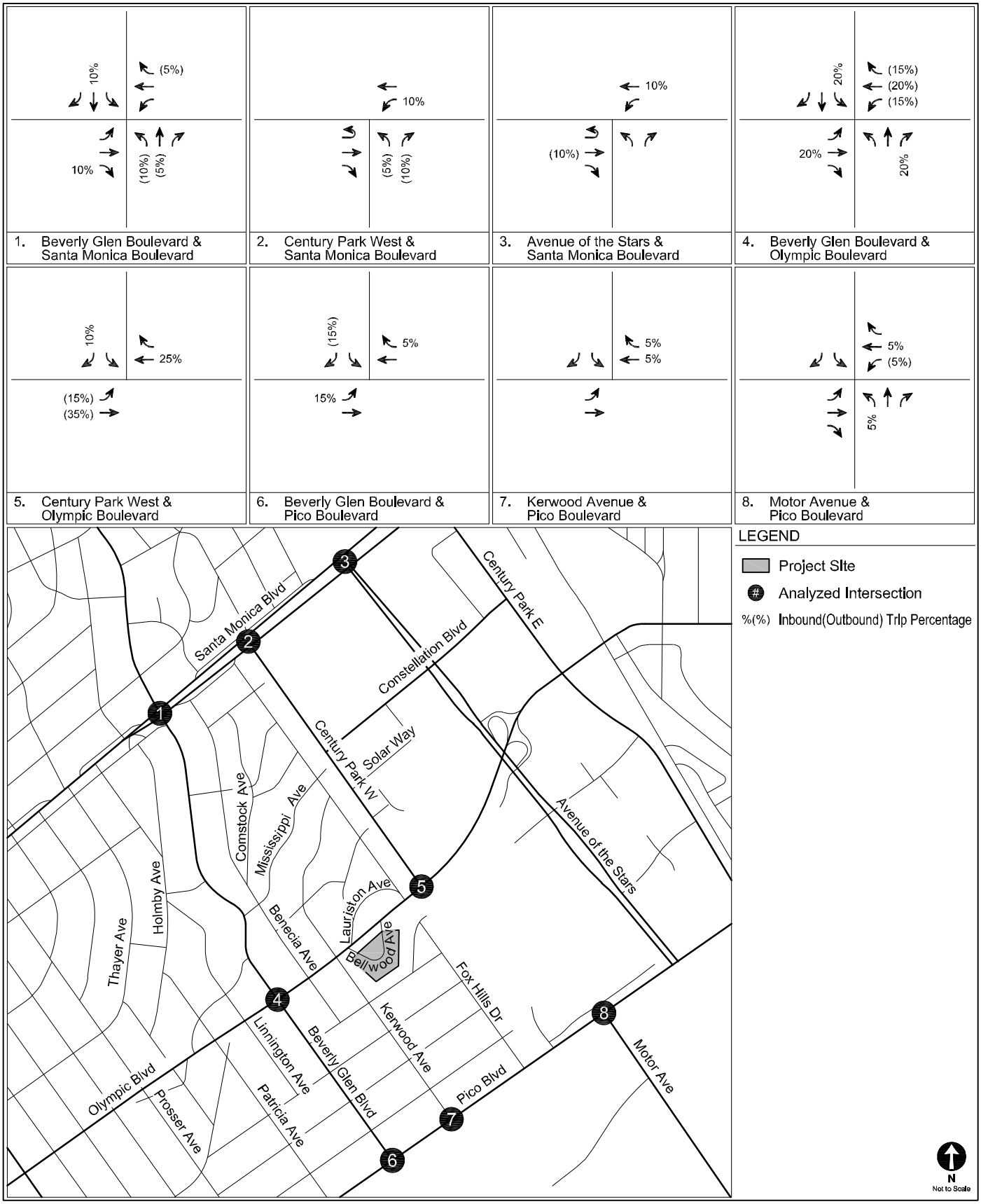
[a] Source: *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017.

[b] The Project Site is located within the *West Los Angeles Transportation Improvement and Mitigation Plan Specific Plan* (City of Los Angeles Department of City Planning, Adopted March 1997) (WLA TIMP) area. Therefore, rates for Eldery Care - Attached and Nursing Home uses from Appendix A of the WLA TIMP were utilized to estimate the PM peak hour trip generation for the Congregate Care and Assisted Living uses, respectively. In addition, the Apartment rates from Appendix A of the WLA TIMP were utilized to estimate the PM peak hour trips generated by the existing multi-family residential uses currently on-site.

[c] The 75 assisted living guestrooms include 51 one-bedroom units and 24 two-bedroom units.

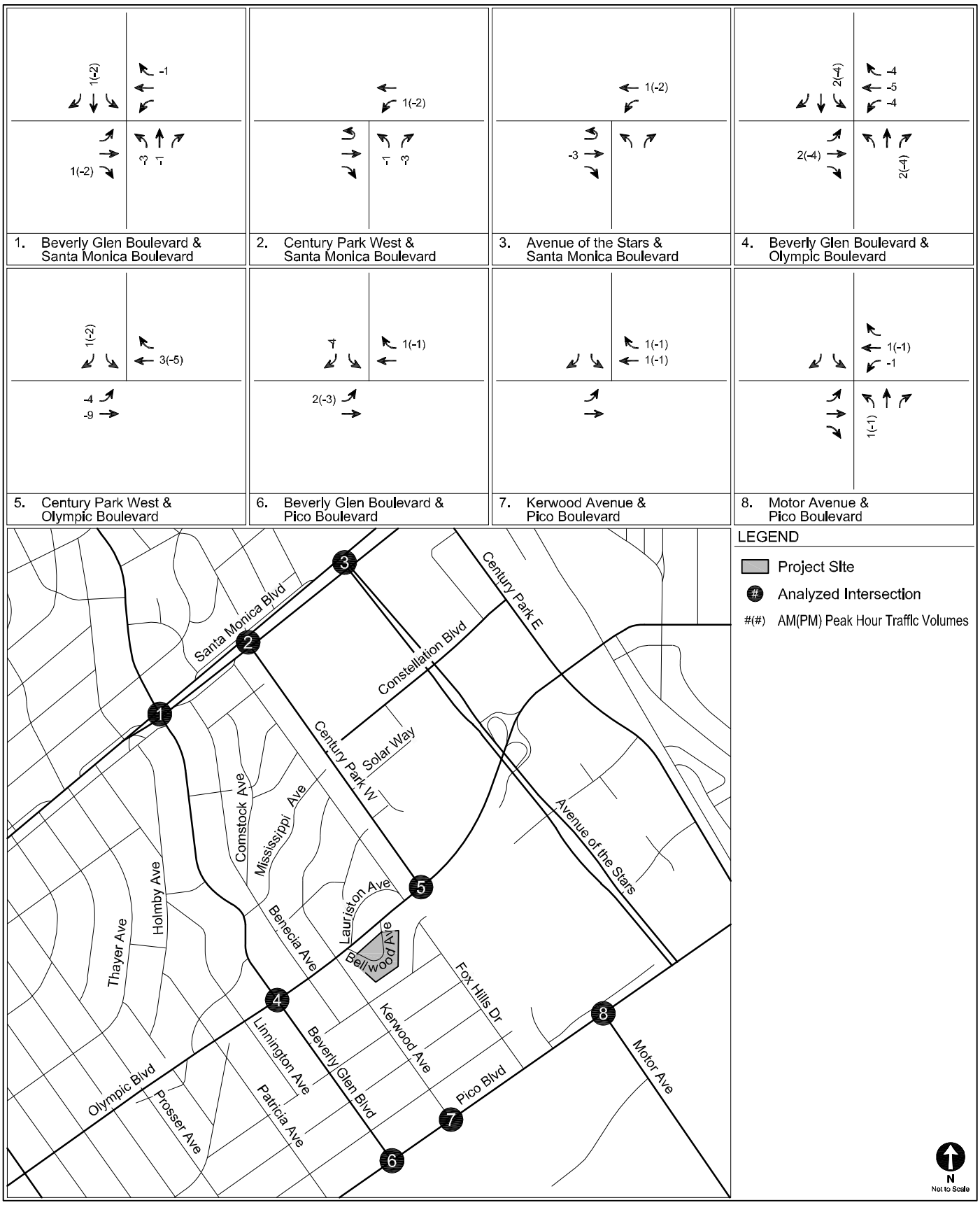
[d] The 46 memory care guestrooms consist only of studio units.

[e] Per LADOT's *Transportation Impact Study Guidelines,* the Project Site is located within a 1/4 mile walking distance from a local bus stop, therefore a transit/walk-in reduction is applied to account for transit usage and walking visitor arrivals from the adjacent commercial developments.



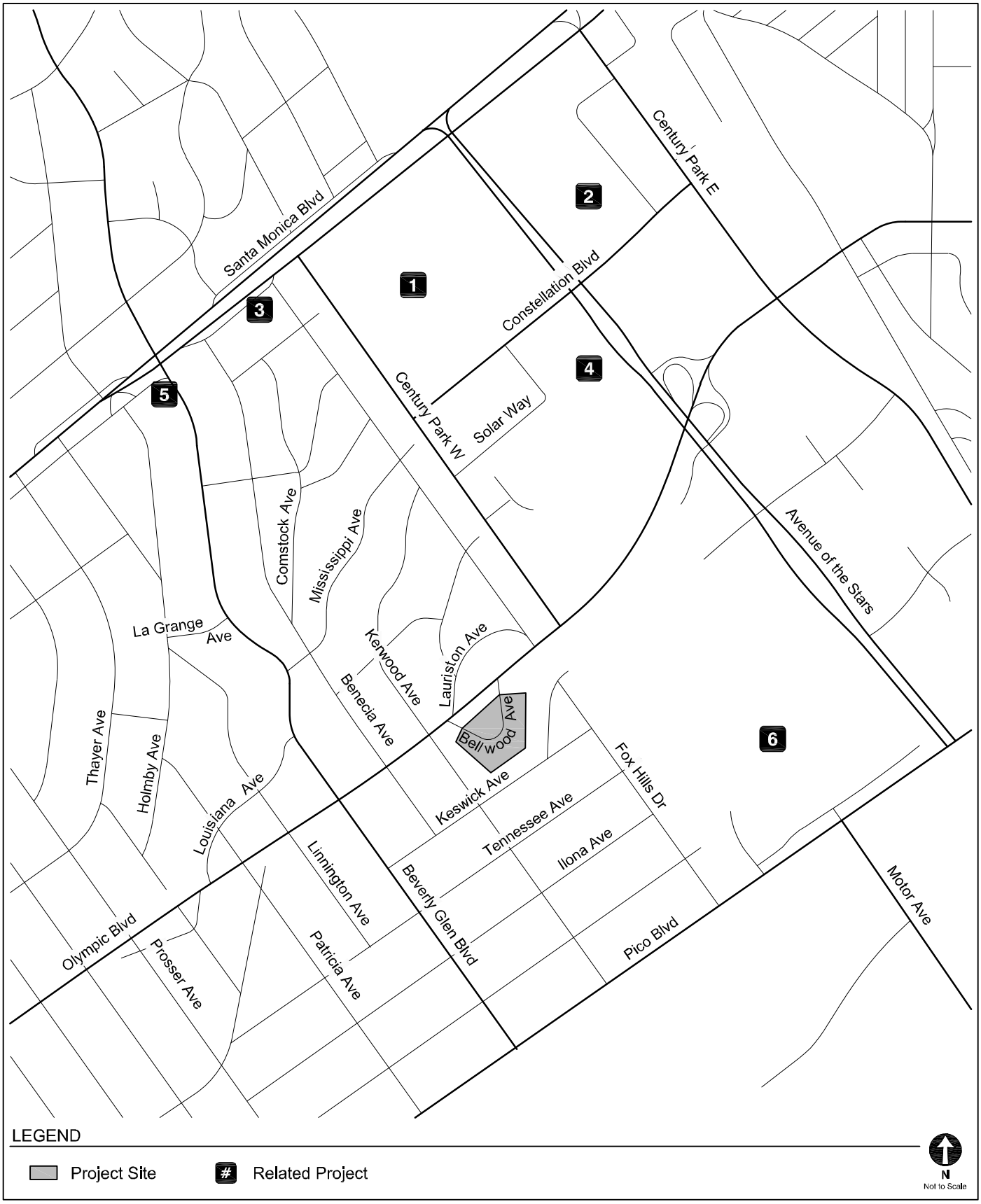
PROJECT TRIP DISTRIBUTION

FIGURE 3



PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
4



LOCATIONS OF RELATED PROJECTS

FIGURE 5

TABLE 3
RELATED PROJECTS LIST

No.	Project	Address	Use	Trip Generation [a]						
				Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
1.	Westfield Century City NCP Project	10250 W Santa Monica Boulevard	retail expansion	1,350	16	10	26	69	75	144
2.	Century City Center	1950 S Avenue of the Stars	725,830 sf office	4,603	604	83	687	103	501	604
3.	26 Apt to 91 Apt	10306 W Santa Monica Boulevard	91 apartments units	432	6	27	33	21	11	32
4.	Century Plaza (Hyatt Regency Hotel)	2025 S Avenue of the Stars	193 condo units, 117,647 sf office, 32,263 sf other, 93,814 sf retail	3,690	25	16	41	263	285	548
5.	Apartments	10400 W Santa Monica Boulevard	96 apartment units	702	10	43	53	32	18	50
6.	Fox Studio Master Plan 2016	10201 W Pico Boulevard	additional 1.1 million sf studio building	8,153	915	94	1,009	112	479	591

Notes
[a] Related project information provided by the Los Angeles Department of Transportation in January 2019, Department of City Planning, and recent traffic studies prepared in the area.

Appendix B

Traffic Volume Data

Turning Movement Count Report AM

Location ID: 1
North/South: Beverly Glen Boulevard
East/West: Santa Monica Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	21	76	73	18	302	22	31	105	26	15	326	23	1038
7:15	27	86	84	43	274	34	34	136	44	22	375	30	1189
7:30	34	141	69	50	377	46	60	180	49	19	407	36	1468
7:45	35	133	113	37	275	49	80	191	29	24	434	35	1435
8:00	32	138	109	42	345	39	94	176	39	21	445	36	1516
8:15	28	154	131	48	306	41	114	173	31	18	474	33	1551
8:30	40	152	131	51	348	54	101	167	29	19	428	26	1546
8:45	32	165	130	47	290	40	110	169	31	18	465	25	1522
9:00	44	152	106	49	340	37	111	127	42	20	440	26	1494
9:15	30	159	147	34	272	40	99	160	40	17	405	47	1450
9:30	40	167	126	58	342	49	86	147	36	19	385	33	1488
9:45	21	138	121	43	318	44	92	132	34	15	396	33	1387
Total Volume:	384	1661	1340	520	3789	495	1012	1863	430	227	4980	383	17084
Approach %	11%	49%	40%	11%	79%	10%	31%	56%	13%	4%	89%	7%	
Peak Hr Begin:	8:00												
PHV	132	609	501	188	1289	174	419	685	130	76	1812	120	6135
PHF	0.950			0.911			0.970			0.956			0.989

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 1
North/South: Beverly Glen Boulevard
East/West: Santa Monica Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	16	189	63	77	373	71	39	144	34	43	374	45	1468
15:15	17	234	64	100	420	51	38	130	36	44	363	37	1534
15:30	14	226	62	96	366	57	36	155	30	49	428	52	1571
15:45	27	233	85	95	383	60	30	127	29	40	388	39	1536
16:00	17	229	67	90	381	44	53	155	43	48	445	44	1616
16:15	22	212	74	73	339	63	47	152	31	43	362	31	1449
16:30	16	213	65	96	331	64	40	178	24	34	421	40	1522
16:45	14	247	86	97	405	64	28	191	39	36	381	41	1629
17:00	11	228	66	136	447	58	32	163	27	34	405	43	1650
17:15	13	274	79	118	448	55	36	164	33	54	367	42	1683
17:30	8	233	82	124	435	79	42	166	22	61	450	49	1751
17:45	21	243	88	130	450	82	33	169	31	60	352	55	1714
Total Volume:	196	2761	881	1232	4778	748	454	1894	379	546	4736	518	19123
Approach %	5%	72%	23%	18%	71%	11%	17%	69%	14%	9%	82%	9%	

Peak Hr Begin:	17:00												
PHV	53	978	315	508	1780	274	143	662	113	209	1574	189	6798
PHF	0.919			0.968			0.985			0.880			0.971

Prepared by City Count, LLC. (www.citycount.com)

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	1	0	7	1	6	1	3	0
7:15	9	1	10	0	10	0	12	1
7:30	13	1	9	0	13	0	17	2
7:45	14	1	10	0	6	1	8	0
8:00	6	0	6	1	13	1	10	0
8:15	12	1	4	0	14	0	13	1
8:30	12	1	6	0	25	1	13	2
8:45	17	0	16	0	11	1	10	0
9:00	14	0	10	0	8	0	15	1
9:15	11	0	7	0	10	1	6	0
9:30	10	0	11	0	14	0	11	0
9:45	8	0	8	0	5	1	7	1

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	19	0	11	0	23	0	14	1
15:15	14	0	15	0	16	0	15	0
15:30	12	0	8	1	7	0	14	1
15:45	16	0	11	1	16	0	16	2
16:00	11	1	5	0	20	0	12	2
16:15	14	0	10	0	23	0	12	1
16:30	16	0	12	0	22	0	17	2
16:45	13	0	7	0	5	0	10	1
17:00	20	0	16	0	21	0	12	0
17:15	21	1	15	0	9	0	4	0
17:30	14	1	7	0	11	0	4	0
17:45	13	1	21	0	9	0	2	1

Turning Movement Count Report AM

Location ID: 2
North/South: Century Park W
East/West: Santa Monica Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	0	0	0	0	290	13	18	0	13	45	388	0	767
7:15	0	0	0	0	375	13	18	0	20	50	435	0	911
7:30	0	0	0	0	380	19	29	0	32	75	493	0	1028
7:45	0	0	0	0	385	28	38	0	24	83	547	0	1105
8:00	0	0	0	0	342	34	49	0	36	85	578	0	1124
8:15	0	0	0	0	395	31	43	0	33	98	647	0	1247
8:30	0	0	0	0	380	33	45	0	54	100	597	0	1209
8:45	0	0	0	0	376	42	59	0	36	104	603	0	1220
9:00	0	0	0	0	325	49	46	0	40	93	626	0	1179
9:15	0	0	0	0	362	53	64	0	31	95	584	0	1189
9:30	0	0	0	0	333	39	58	0	51	111	552	0	1144
9:45	0	0	0	0	384	21	54	0	28	81	550	0	1118
Total Volume:	0	0	0	0	4327	375	521	0	398	1020	6600	0	13241
Approach %	0%	0%	0%	0%	92%	8%	57%	0%	43%	13%	87%	0%	

Peak Hr Begin:	8:15												
PHV	0	0	0	0	1476	155	193	0	163	395	2473	0	4855
PHF	0.000			0.957			0.899			0.962			0.973

Turning Movement Count Report PM

Location ID: 2
North/South: Century Park W
East/West: Santa Monica Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	0	0	0	0	406	31	77	0	106	80	452	0	1152
15:15	0	0	0	0	408	44	80	0	105	73	396	0	1106
15:30	0	0	0	0	432	43	63	0	120	73	442	0	1173
15:45	0	0	0	0	395	47	65	0	108	72	457	0	1144
16:00	0	0	0	0	419	48	61	0	95	102	484	0	1209
16:15	0	0	0	0	349	38	113	0	72	79	414	0	1065
16:30	0	0	0	0	390	31	80	0	109	81	465	0	1156
16:45	0	0	0	0	396	36	82	0	112	81	442	0	1149
17:00	0	0	0	0	472	29	53	0	137	77	452	0	1220
17:15	0	0	0	0	466	39	69	0	141	92	418	0	1225
17:30	0	0	0	0	471	28	91	0	142	101	484	0	1317
17:45	0	0	0	0	457	58	79	0	160	103	371	0	1228
Total Volume:	0	0	0	0	5061	472	913	0	1407	1014	5277	0	14144
Approach %	0%	0%	0%	0%	91%	9%	39%	0%	61%	16%	84%	0%	

Peak Hr Begin:	17:00												
PHV	0	0	0	0	1866	154	292	0	580	373	1725	0	4990
PHF	0.000			0.981			0.912			0.897			0.947

Prepared by City Count, LLC. (www.citycount.com)

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	0	0	19	0	0	0
7:15	0	0	0	0	16	0	0	0
7:30	0	0	0	0	26	0	0	0
7:45	0	0	1	0	33	1	0	0
8:00	0	0	0	0	26	1	0	0
8:15	0	0	0	0	36	1	0	0
8:30	0	0	0	0	30	1	0	0
8:45	0	0	0	0	37	1	0	0
9:00	0	0	0	0	23	0	0	0
9:15	0	0	0	0	25	0	0	0
9:30	0	0	0	0	49	0	0	0
9:45	0	0	0	0	37	0	0	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	0	0	0	0	57	2	0	0
15:15	0	0	0	0	58	5	0	0
15:30	0	0	0	0	60	4	0	0
15:45	0	0	1	0	74	1	2	0
16:00	0	0	0	0	59	1	3	0
16:15	0	0	1	0	68	1	2	0
16:30	0	0	0	0	53	0	0	0
16:45	0	0	0	0	67	3	0	0
17:00	0	0	0	0	51	1	0	0
17:15	0	0	0	0	65	1	0	0
17:30	0	0	0	0	45	1	0	0
17:45	0	0	1	0	56	0	0	0

Turning Movement Count Report AM

Location ID: 3
North/South: Avenue of the Stars
East/West: Santa Monica Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	0	0	0	0	311	88	46	0	39	105	256	2	847
7:15	0	0	0	0	319	97	45	0	50	130	326	3	970
7:30	0	0	0	0	373	98	66	0	60	131	353	5	1086
7:45	0	0	0	0	346	102	70	0	81	109	466	2	1176
8:00	0	0	0	0	343	158	99	0	79	126	448	0	1253
8:15	0	0	0	0	386	134	112	0	62	123	535	4	1356
8:30	0	0	0	0	351	158	109	0	86	145	498	6	1353
8:45	0	0	0	0	324	147	99	0	56	141	527	8	1302
9:00	0	0	0	0	298	181	121	0	68	151	492	5	1316
9:15	0	0	0	0	351	149	126	0	64	145	526	6	1367
9:30	0	0	0	0	364	168	118	0	53	142	476	8	1329
9:45	0	0	0	0	346	121	98	0	66	127	471	13	1242
Total Volume:	0	0	0	0	4112	1601	1109	0	764	1575	5374	62	14597
Approach %	0%	0%	0%	0%	72%	28%	59%	0%	41%	22%	77%	1%	

Peak Hr Begin:	8:30												
PHV	0	0	0	0	1324	635	455	0	274	582	2043	25	5338
PHF	0.000			0.962			0.935			0.979			0.976

Turning Movement Count Report PM

Location ID: 3
North/South: Avenue of the Stars
East/West: Santa Monica Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	0	0	0	0	375	73	105	0	90	94	412	12	1161
15:15	0	0	0	0	428	63	125	0	119	108	398	11	1252
15:30	0	0	0	0	381	86	100	0	107	119	420	13	1226
15:45	0	0	0	0	409	86	110	0	120	113	409	8	1255
16:00	0	0	0	0	379	80	137	0	128	123	446	14	1307
16:15	0	0	0	0	336	75	128	0	106	105	408	11	1169
16:30	0	0	0	0	363	73	165	0	105	99	423	17	1245
16:45	0	0	0	0	413	78	155	0	127	118	398	12	1301
17:00	0	0	0	0	417	88	184	0	135	112	373	13	1322
17:15	0	0	0	0	458	92	160	0	173	104	381	8	1376
17:30	0	0	0	0	411	81	190	0	175	103	445	18	1423
17:45	0	0	0	0	452	80	170	0	162	99	371	14	1348
Total Volume:	0	0	0	0	4822	955	1729	0	1547	1297	4884	151	15385
Approach %	0%	0%	0%	0%	83%	17%	53%	0%	47%	20%	77%	2%	

Peak Hr Begin:	17:00												
PHV	0	0	0	0	1738	341	704	0	645	418	1570	53	5469
PHF	0.000			0.945			0.924			0.902			0.961

Prepared by City Count, LLC. (www.citycount.com)

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	6	0	22	0	0	0
7:15	0	0	5	0	6	0	0	0
7:30	0	0	14	1	14	1	0	0
7:45	0	0	12	1	11	3	2	0
8:00	0	0	18	0	12	1	1	0
8:15	0	0	17	0	22	0	0	0
8:30	0	0	16	0	14	1	0	0
8:45	0	0	12	1	28	1	0	0
9:00	0	0	18	0	16	0	2	0
9:15	0	0	16	1	15	0	1	0
9:30	0	0	9	0	8	0	1	0
9:45	0	0	13	2	22	2	2	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	0	0	4	1	36	1	0	0
15:15	0	0	5	0	23	2	0	0
15:30	0	0	3	0	22	5	1	0
15:45	0	0	15	1	28	0	0	0
16:00	0	0	10	0	25	1	0	0
16:15	0	0	4	1	14	3	0	0
16:30	0	0	6	0	19	1	1	0
16:45	0	0	10	0	15	1	0	0
17:00	0	0	9	0	16	1	0	0
17:15	0	0	10	0	19	2	0	0
17:30	0	0	10	0	27	0	0	0
17:45	0	0	6	0	17	2	0	0

Turning Movement Count Report AM

Location ID: 4
North/South: Beverly Glen Boulevard
East/West: Olympic Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	38	48	18	17	335	7	12	113	35	14	214	29	880
7:15	51	66	24	21	410	14	14	153	42	18	258	35	1106
7:30	76	90	30	30	480	23	20	173	54	18	334	60	1388
7:45	84	93	38	25	455	9	28	154	73	23	453	80	1515
8:00	56	98	43	24	375	11	40	202	89	27	486	88	1539
8:15	75	88	58	20	494	8	50	179	36	18	605	91	1722
8:30	78	91	59	19	319	8	72	261	56	19	535	78	1595
8:45	69	89	59	33	431	11	59	171	50	20	632	56	1680
9:00	63	92	72	24	370	16	93	186	36	6	521	59	1538
9:15	56	80	56	25	455	13	96	169	30	17	626	49	1672
9:30	50	88	74	23	453	17	82	208	38	17	495	48	1593
9:45	57	85	51	28	451	22	45	136	37	28	511	58	1509

Total Volume:	753	1008	582	289	5028	159	611	2105	576	225	5670	731	17737
Approach %	32%	43%	25%	5%	92%	3%	19%	64%	17%	3%	86%	11%	

Peak Hr Begin:	8:00												
PHV	278	366	219	96	1619	38	221	813	231	84	2258	313	6536
PHF	0.946			0.840			0.813			0.930			0.949

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 4
North/South: Beverly Glen Boulevard
East/West: Olympic Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	49	180	54	24	404	45	30	142	38	17	282	32	1297
15:15	52	200	41	35	498	49	28	122	36	16	275	33	1385
15:30	64	202	59	35	452	41	38	161	39	10	235	38	1374
15:45	59	180	46	26	485	43	24	129	33	17	340	37	1419
16:00	47	198	67	38	419	53	26	168	33	29	374	53	1505
16:15	50	193	63	33	504	35	11	154	21	13	397	33	1507
16:30	41	173	50	27	437	33	27	148	33	25	371	52	1417
16:45	58	180	57	44	533	37	18	162	27	13	375	63	1567
17:00	45	218	67	23	500	47	30	147	32	28	387	51	1575
17:15	48	187	60	26	591	40	19	168	53	30	369	39	1630
17:30	45	192	80	15	501	54	21	165	47	32	346	65	1563
17:45	54	174	74	24	592	34	19	145	46	38	429	50	1679

Total Volume:	612	2277	718	350	5916	511	291	1811	438	268	4180	546	17918
Approach %	17%	63%	20%	5%	87%	8%	11%	71%	17%	5%	84%	11%	

Peak Hr Begin:	17:00												
PHV	192	771	281	88	2184	175	89	625	178	128	1531	205	6447
PHF	0.942			0.931			0.929			0.901			0.960

Prepared by City Count, LLC. (www.citycount.com)

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	1	0	1	0	1	0	0	0
7:15	1	0	1	0	0	0	1	0
7:30	2	0	2	0	1	0	2	0
7:45	2	0	0	0	4	0	1	0
8:00	3	0	2	0	2	1	1	0
8:15	2	0	3	0	6	1	1	0
8:30	0	0	7	0	3	0	3	0
8:45	0	0	5	1	4	0	0	0
9:00	1	0	0	1	1	1	0	0
9:15	2	0	1	0	3	0	2	1
9:30	0	0	6	0	3	1	1	0
9:45	3	0	2	0	2	0	1	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	4	0	3	0	3	0	1	0
15:15	6	2	1	0	5	0	2	0
15:30	2	0	2	1	0	0	2	1
15:45	0	0	1	1	1	0	0	0
16:00	0	0	4	2	3	0	1	0
16:15	0	0	1	0	2	1	2	0
16:30	1	0	6	0	6	0	1	0
16:45	0	0	3	1	4	0	0	0
17:00	0	0	2	0	5	0	0	0
17:15	0	0	4	0	1	0	0	0
17:30	0	0	4	1	1	2	0	2
17:45	0	0	5	0	2	0	2	0

Turning Movement Count Report AM

Location ID: 5
North/South: Century Park W
East/West: Olympic Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	14	0	5	20	354	0	0	0	0	0	182	48	623
7:15	13	0	7	33	444	0	0	0	0	0	268	52	817
7:30	12	0	9	32	496	0	0	0	0	0	322	66	937
7:45	23	0	11	46	473	0	0	0	0	0	385	91	1029
8:00	24	0	9	45	422	0	0	0	0	0	457	133	1090
8:15	20	0	7	56	492	0	0	0	0	0	546	139	1260
8:30	22	0	11	69	383	0	0	0	0	0	543	140	1168
8:45	25	0	19	72	453	0	0	0	0	0	625	158	1352
9:00	22	0	18	64	449	0	0	0	0	0	559	169	1281
9:15	21	0	18	70	460	0	0	0	0	0	629	163	1361
9:30	43	0	25	57	424	0	0	0	0	0	580	141	1270
9:45	17	0	13	65	478	0	0	0	0	0	504	112	1189

Total Volume:	256	0	152	629	5328	0	0	0	0	0	5600	1412	13377
Approach %	63%	0%	37%	11%	89%	0%	0%	0%	0%	0%	80%	20%	

Peak Hr Begin:	8:45												
PHV	111	0	80	263	1786	0	0	0	0	0	2393	631	5264
PHF	0.702			0.967			0.000			0.955			0.967

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 5
North/South: Century Park W
East/West: Olympic Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	89	0	54	35	434	0	0	0	0	0	349	49	1010
15:15	135	0	67	49	444	0	0	0	0	0	295	40	1030
15:30	132	0	74	35	418	0	0	0	0	0	332	64	1055
15:45	120	0	64	36	454	0	0	0	0	0	324	46	1044
16:00	104	0	76	42	440	0	0	0	0	0	463	50	1175
16:15	68	0	62	39	524	0	0	0	0	0	431	41	1165
16:30	95	0	49	35	393	0	0	0	0	0	430	78	1080
16:45	79	0	68	52	370	0	0	0	0	0	370	62	1001
17:00	98	0	55	39	530	0	0	0	0	0	441	60	1223
17:15	82	0	63	45	570	0	0	0	0	0	385	43	1188
17:30	72	0	58	46	476	0	0	0	0	0	413	51	1116
17:45	83	0	63	49	474	0	0	0	0	0	419	60	1148
Total Volume:	1157	0	753	502	5527	0	0	0	0	0	4652	644	13235
Approach %	61%	0%	39%	8%	92%	0%	0%	0%	0%	0%	88%	12%	

Peak Hr Begin:	17:00												
PHV	335	0	239	179	2050	0	0	0	0	0	1658	214	4675
PHF	0.938			0.906			0.000			0.934			0.956

Prepared by City Count, LLC. (www.citycount.com)

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	1	0	1	0	0	0	0	0
7:15	5	0	2	0	0	0	0	0
7:30	4	1	1	0	0	0	2	0
7:45	4	0	2	0	0	0	1	0
8:00	3	1	4	2	0	0	6	0
8:15	9	1	4	0	0	0	8	1
8:30	7	0	4	0	0	0	6	0
8:45	6	1	0	1	0	0	2	0
9:00	2	0	9	2	0	0	4	0
9:15	3	0	2	0	0	0	1	0
9:30	3	0	5	0	0	0	4	0
9:45	1	1	2	0	0	0	1	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	2	0	3	0	0	0	0	0
15:15	5	0	3	0	0	0	0	0
15:30	1	0	4	0	0	0	2	0
15:45	3	0	2	0	0	0	3	0
16:00	2	0	1	0	0	0	4	0
16:15	4	0	1	0	0	0	8	0
16:30	2	0	0	0	0	0	3	0
16:45	6	1	2	1	0	0	1	2
17:00	3	0	0	0	0	0	2	0
17:15	4	0	3	0	0	0	5	0
17:30	6	0	3	0	0	0	4	0
17:45	2	0	0	1	0	0	2	3

Turning Movement Count Report AM

Location ID: 6
North/South: Beverly Glen Boulevard
East/West: Pico Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	40	0	28	92	270	0	0	0	0	0	182	74	686
7:15	49	0	37	118	341	0	0	0	0	0	230	82	857
7:30	52	0	65	128	357	0	0	0	0	0	247	97	946
7:45	70	0	73	92	312	0	0	0	0	0	330	126	1003
8:00	61	0	54	86	296	0	0	0	0	0	378	145	1020
8:15	66	0	56	88	280	0	0	0	0	0	419	160	1069
8:30	48	0	47	101	262	0	0	0	0	0	449	160	1067
8:45	56	0	62	82	224	0	0	0	0	0	499	172	1095
9:00	42	0	53	65	223	0	0	0	0	0	451	195	1029
9:15	57	0	63	79	246	0	0	0	0	0	425	188	1058
9:30	50	0	60	68	227	0	0	0	0	0	386	162	953
9:45	53	0	67	59	187	0	0	0	0	0	337	135	838

Total Volume:	644	0	665	1058	3225	0	0	0	0	0	4333	1696	11621
Approach %	49%	0%	51%	25%	75%	0%	0%	0%	0%	0%	72%	28%	

Peak Hr Begin:	8:15												
PHV	212	0	218	336	989	0	0	0	0	0	1818	687	4260
PHF	0.881			0.900			0.000			0.933			0.973

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 6
North/South: Beverly Glen Boulevard
East/West: Pico Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	111	0	97	60	256	0	0	0	0	0	265	106	895
15:15	121	0	93	77	276	0	0	0	0	0	309	115	991
15:30	110	0	102	62	264	1	0	0	0	0	273	124	936
15:45	105	0	98	63	266	0	0	0	0	0	281	127	940
16:00	89	0	92	55	306	0	0	0	0	0	253	120	915
16:15	103	0	77	56	307	0	0	0	0	0	299	116	958
16:30	84	0	109	57	295	0	0	0	0	0	215	127	887
16:45	102	0	84	53	316	0	0	0	0	0	267	140	962
17:00	104	0	91	52	394	0	0	0	0	0	263	116	1020
17:15	120	0	82	71	372	0	0	0	0	0	231	152	1028
17:30	117	0	90	63	390	0	0	0	0	0	256	114	1030
17:45	82	0	95	69	397	0	0	0	0	0	265	140	1048

Total Volume:	1248	0	1110	738	3839	1	0	0	0	0	3177	1497	11610
Approach %	53%	0%	47%	16%	84%	0%	0%	0%	0%	0%	68%	32%	

Peak Hr Begin:	17:00												
PHV	423	0	358	255	1553	0	0	0	0	0	1015	522	4126
PHF	0.943			0.970			0.000			0.949			0.984

Prepared by City Count, LLC. (www.citycount.com)

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	1	0	0	0	0	0	0	0
7:15	4	0	0	0	0	0	2	0
7:30	6	0	0	0	0	0	3	0
7:45	2	0	0	0	0	0	2	0
8:00	3	0	0	0	0	0	2	0
8:15	5	0	0	0	0	0	3	0
8:30	2	0	0	0	0	0	0	0
8:45	4	1	0	0	0	0	3	0
9:00	3	0	0	0	0	0	2	0
9:15	1	0	0	0	0	0	3	0
9:30	4	0	0	0	0	0	3	0
9:45	5	0	0	0	0	0	4	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	1	0	0	0	0	0	0	0
15:15	4	0	0	0	0	0	2	1
15:30	2	0	0	0	0	0	1	0
15:45	4	0	0	0	0	0	1	0
16:00	3	0	0	0	0	0	2	0
16:15	5	1	0	0	0	0	2	0
16:30	4	0	0	0	0	0	3	0
16:45	0	1	0	0	0	0	1	0
17:00	1	0	0	0	0	0	1	0
17:15	3	0	0	0	0	0	1	0
17:30	2	0	0	0	0	0	3	1
17:45	5	1	0	0	0	0	0	0

Turning Movement Count Report AM

Location ID: 7
North/South: Kerwood Avenue
East/West: Pico Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	9	0	2	4	345	3	0	0	0	1	194	4	562
7:15	11	1	8	8	449	9	0	0	1	1	275	5	768
7:30	11	0	6	6	479	3	3	0	0	0	289	4	801
7:45	15	0	8	7	402	2	1	0	0	4	392	11	842
8:00	24	0	4	13	365	2	4	1	3	3	409	13	841
8:15	24	0	2	11	346	4	3	0	1	2	450	20	863
8:30	30	1	16	24	313	6	0	0	3	2	440	20	855
8:45	15	0	13	31	311	2	4	1	2	13	552	11	955
9:00	20	1	5	9	264	3	12	4	5	9	487	11	830
9:15	12	0	6	13	312	10	8	4	7	6	472	16	866
9:30	9	1	5	15	259	4	4	2	5	7	420	13	744
9:45	4	1	6	10	249	2	2	1	1	2	381	9	668
Total Volume:	184	5	81	151	4094	50	41	13	28	50	4761	137	9595
Approach %	68%	2%	30%	4%	95%	1%	50%	16%	34%	1%	96%	3%	
Peak Hr Begin:	8:00												
PHV	93	1	35	79	1335	14	11	2	9	20	1851	64	3514
PHF	0.686			0.939			0.688			0.840			0.920

Turning Movement Count Report PM

Location ID: 7
North/South: Kerwood Avenue
East/West: Pico Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	16	1	7	14	303	11	6	1	0	8	343	5	715
15:15	14	1	10	19	327	4	4	2	2	13	357	8	761
15:30	7	2	10	9	320	7	7	1	3	12	378	16	772
15:45	19	2	17	15	309	13	3	1	2	22	321	14	738
16:00	16	1	10	18	345	11	10	2	8	20	339	5	785
16:15	10	0	6	16	332	4	5	3	5	16	337	2	736
16:30	16	1	16	12	348	6	10	0	2	10	332	2	755
16:45	8	1	12	4	350	5	3	0	3	16	315	1	718
17:00	14	0	10	11	427	9	5	3	4	12	353	2	850
17:15	23	4	11	19	446	10	5	0	0	11	291	1	821
17:30	17	0	10	13	447	10	6	3	1	15	342	8	872
17:45	17	0	9	22	443	26	8	1	5	16	311	14	872

Total Volume:	177	13	128	172	4397	116	72	17	35	171	4019	78	9395
Approach %	56%	4%	40%	4%	94%	2%	58%	14%	28%	4%	94%	2%	

Peak Hr Begin:	17:00												
PHV	71	4	40	65	1763	55	24	7	10	54	1297	25	3415
PHF	0.757			0.959			0.732			0.937			0.979

Prepared by City Count, LLC. (www.citycount.com)

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	0	0	5	1	1	0
7:15	4	0	1	0	8	1	1	0
7:30	2	0	1	0	12	0	0	0
7:45	2	1	0	0	13	1	2	0
8:00	5	0	4	0	16	0	1	0
8:15	7	0	4	0	18	0	1	0
8:30	3	0	15	0	19	0	4	0
8:45	19	0	19	0	14	0	2	0
9:00	28	0	33	0	8	0	4	0
9:15	11	0	25	0	5	0	0	1
9:30	8	0	5	0	6	0	1	0
9:45	4	0	1	0	7	0	0	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	4	0	0	0	4	1	1	0
15:15	1	0	0	0	3	1	2	0
15:30	1	0	11	0	6	1	0	1
15:45	7	0	41	0	24	1	2	0
16:00	3	0	17	0	8	1	3	0
16:15	3	0	6	0	16	0	3	0
16:30	4	0	1	0	11	1	2	0
16:45	0	1	3	0	6	0	0	0
17:00	1	1	1	0	4	1	4	0
17:15	4	0	1	0	7	0	2	0
17:30	3	0	16	0	6	1	2	0
17:45	13	1	75	0	28	4	6	0

Turning Movement Count Report AM

Location ID: 8
North/South: Motor Avenue
East/West: Pico Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	2	0	3	22	306	37	103	0	37	21	137	28	696
7:15	8	0	4	30	393	30	126	1	78	29	178	18	895
7:30	5	0	1	35	430	37	160	0	65	45	256	20	1054
7:45	4	0	2	27	342	50	189	5	69	50	283	39	1060
8:00	7	0	5	39	339	59	221	2	80	26	343	43	1164
8:15	13	0	6	36	268	48	254	4	70	28	343	46	1116
8:30	8	0	7	61	269	54	259	1	73	42	365	66	1205
8:45	13	1	6	95	246	66	312	10	60	36	334	87	1266
9:00	7	0	10	87	244	60	234	19	49	39	395	69	1213
9:15	12	0	10	97	247	49	281	11	66	28	331	84	1216
9:30	13	1	12	94	226	55	166	7	60	31	354	91	1110
9:45	16	0	9	64	203	68	211	6	52	33	258	84	1004
Total Volume:	108	2	75	687	3513	613	2516	66	759	408	3577	675	12999
Approach %	58%	1%	41%	14%	73%	13%	75%	2%	23%	9%	77%	14%	

Peak Hr Begin:	8:30												
PHV	40	1	33	340	1006	229	1086	41	248	145	1425	306	4900
PHF	0.841			0.967			0.900			0.932			0.968

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 8
North/South: Motor Avenue
East/West: Pico Boulevard

Date: 04/09/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	38	2	25	14	261	84	80	1	38	42	262	17	864
15:15	32	3	18	15	268	108	105	1	48	51	284	19	952
15:30	49	3	25	11	241	97	123	0	53	48	263	17	930
15:45	37	0	24	19	298	104	79	2	45	66	275	12	961
16:00	65	3	37	11	280	94	103	2	48	41	249	20	953
16:15	46	1	23	10	243	89	88	1	31	44	276	11	863
16:30	48	3	32	8	270	110	99	1	34	50	240	9	904
16:45	42	1	21	7	292	114	92	1	43	50	270	10	943
17:00	84	4	52	7	339	98	105	1	45	30	273	10	1048
17:15	51	0	39	6	394	109	96	0	47	36	294	7	1079
17:30	81	3	45	9	368	106	89	3	37	56	249	7	1053
17:45	86	3	50	9	415	118	92	1	35	61	292	8	1170

Total Volume:	659	26	391	126	3669	1231	1151	14	504	575	3227	147	11720
Approach %	61%	2%	36%	3%	73%	24%	69%	1%	30%	15%	82%	4%	

Peak Hr Begin:	17:00												
PHV	302	10	186	31	1516	431	382	5	164	183	1108	32	4350
PHF	0.889			0.912			0.912			0.916			0.929

Prepared by City Count, LLC. (www.citycount.com)

Pedestrian/Bicycle Count Report

Leg:	*North*		*East*		*South*		*West*	
Class:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
7:00	0	1	0	0	2	1	4	0
7:15	3	0	0	0	1	0	2	0
7:30	3	0	0	0	1	0	8	0
7:45	1	3	0	0	1	0	12	0
8:00	3	0	0	0	1	0	2	0
8:15	2	1	0	0	1	2	1	0
8:30	0	1	0	0	0	0	4	0
8:45	3	0	0	0	0	0	6	0
9:00	3	1	0	0	5	0	15	0
9:15	2	1	0	0	7	0	5	0
9:30	1	0	0	0	0	0	2	0
9:45	2	2	0	0	0	0	3	1

Leg:	*North*		*East*		*South*		*West*	
Class:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
15:00	1	1	0	0	2	0	3	0
15:15	2	0	0	0	1	0	1	0
15:30	0	1	0	0	0	1	2	1
15:45	0	0	0	0	0	0	4	0
16:00	2	0	0	0	0	0	2	0
16:15	1	0	0	0	1	0	3	0
16:30	3	1	0	0	1	0	1	1
16:45	2	1	0	0	0	0	2	0
17:00	1	2	0	0	0	0	12	4
17:15	7	0	0	0	0	0	6	0
17:30	0	0	0	0	1	0	3	0
17:45	3	0	0	0	1	0	1	3

TRAFFIC COUNT SUMMARY

City of Los Angeles
Department of Transportation
Count by: Traffic Solution

STREET:
North/South: BELLWOOD AVENUE (EAST)

East/West: OLYMPIC BOULEVARD

Day: AM WEDNESDAY — Date: APRIL 19, 2006 — Weather: CLEAR
PM WEDNESDAY — APRIL 19, 2006
Hours: 7-10 AM 3-6 PM

School Day: YES — District: MID WILSHIRE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	N/A	N/A	N/A	N/A
BIKES	N/A	N/A	N/A	N/A
BUSES	N/A	N/A	N/A	N/A

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	12	9:45	0	7:00	461	8:00	492	8:30
PM PK 15 MIN	10	5:15	0	3:00	596	4:15	596	3:45
AM PK HOUR	30	9:00	0	7:00	1,788	8:00	1,936	8:00
PM PK HOUR	32	5:00	0	3:00	2,290	4:00	2,350	3:15

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	9	0	14	23
8 - 9	8	0	12	20
9 - 10	5	0	25	30
3 - 4	4	0	7	11
4 - 5	7	0	17	24
5 - 6	10	0	22	32
TOTAL	43	0	97	140

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	0	0	0	0
8 - 9	0	0	0	0
9 - 10	0	0	0	0
3 - 4	0	0	0	0
4 - 5	0	0	0	0
5 - 6	0	0	0	0
TOTAL	0	0	0	0

TOTAL	XING S/L		XING N/L	
N-S	Ped	Sch	Ped	Sch
23	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A
30	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A
24	N/A	N/A	N/A	N/A
32	N/A	N/A	N/A	N/A
140	N/A	N/A	N/A	N/A

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	0	1,471	2	1,473
8 - 9	0	1,784	4	1,788
9 - 10	0	1,722	2	1,724
3 - 4	0	2,080	3	2,083
4 - 5	0	2,285	5	2,290
5 - 6	0	2,234	6	2,240
TOTAL	0	11,576	22	11,598

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	10	1,573	0	1,583
8 - 9	6	1,930	0	1,936
9 - 10	6	1,880	0	1,886
3 - 4	24	2,263	0	2,287
4 - 5	28	2,263	0	2,291
5 - 6	29	2,152	0	2,181
TOTAL	103	12,061	0	12,164

TOTAL	XING W/L		XING E/L	
E-W	Ped	Sch	Ped	Sch
3,056	N/A	N/A	N/A	N/A
3,724	N/A	N/A	N/A	N/A
3,610	N/A	N/A	N/A	N/A
4,370	N/A	N/A	N/A	N/A
4,581	N/A	N/A	N/A	N/A
4,421	N/A	N/A	N/A	N/A
23,762	N/A	N/A	N/A	N/A

TRAFFIC COUNT SUMMARY

City of Los Angeles
Department of Transportation
Count by: Traffic Solution

STREET:
North/South: BELLWOOD AVENUE (WEST)

East/West: OLYMPIC BOULEVARD

Day: AM WEDNESDAY Date: APRIL 19, 2006 Weather: CLEAR
PM WEDNESDAY APRIL 19, 2006
Hours: 7-10 AM 3-6 PM

School Day: YES District: MID WILSHIRE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	N/A	N/A	N/A	N/A
BIKES	N/A	N/A	N/A	N/A
BUSES	N/A	N/A	N/A	N/A

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	7	8:45	20	9:45	481	8:15	500	8:30
PM PK 15 MIN	8	5:45	32	5:30	609	4:15	602	4:45
AM PK HOUR	20	8:00	58	9:00	1,856	8:00	1,906	8:30
PM PK HOUR	20	3:00	105	5:00	2,373	4:00	2,337	4:15

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	4	0	8	12
8 - 9	4	1	15	20
9 - 10	10	0	3	13
3 - 4	7	0	13	20
4 - 5	8	0	8	16
5 - 6	7	0	11	18
TOTAL	40	1	58	99

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total	TOTAL N-S	XING S/L Ped	XING S/L Sch	XING N/L Ped	XING N/L Sch
7 - 8	9	0	22	31	43	N/A	N/A	N/A	N/A
8 - 9	9	0	45	54	74	N/A	N/A	N/A	N/A
9 - 10	10	0	48	58	71	N/A	N/A	N/A	N/A
3 - 4	7	0	70	77	97	N/A	N/A	N/A	N/A
4 - 5	11	0	72	83	99	N/A	N/A	N/A	N/A
5 - 6	8	0	97	105	123	N/A	N/A	N/A	N/A
TOTAL	54	0	354	408	507	N/A	N/A	N/A	N/A

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	43	1,401	17	1,461
8 - 9	53	1,790	13	1,856
9 - 10	76	1,747	11	1,834
3 - 4	64	2,156	18	2,238
4 - 5	70	2,288	15	2,373
5 - 6	58	2,155	17	2,230
TOTAL	364	11,537	91	11,992

WESTBOUND Approach

Hours	Lt	Th	Rt	Total	TOTAL E-W	XING W/L Ped	XING W/L Sch	XING E/L Ped	XING E/L Sch
7 - 8	5	1,627	11	1,643	3,104	N/A	N/A	N/A	N/A
8 - 9	21	1,859	18	1,898	3,754	N/A	N/A	N/A	N/A
9 - 10	12	1,854	21	1,887	3,721	N/A	N/A	N/A	N/A
3 - 4	10	2,255	14	2,279	4,517	N/A	N/A	N/A	N/A
4 - 5	8	2,320	7	2,335	4,708	N/A	N/A	N/A	N/A
5 - 6	13	2,257	11	2,281	4,511	N/A	N/A	N/A	N/A
TOTAL	69	12,172	82	12,323	24,315	N/A	N/A	N/A	N/A

Appendix C

Plans, Policies, and Programs Consistency Worksheet

Plans, Policies and Programs Consistency Worksheet

The worksheet provides a structured approach to evaluate the threshold T-1 question below, that asks whether a project conflicts with a program, plan, ordinance or policy addressing the circulation system. The intention of the worksheet is to streamline the project review by highlighting the most relevant plans, policies and programs when assessing potential impacts to the City's circulation system.

> Threshold T-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities?

This worksheet does not include an exhaustive list of City policies, and does not include community plans, specific plans, or any area-specific regulatory overlays. The Department of City Planning project planner will need to be consulted to determine if the project would obstruct the City from carrying out a policy or program in a community plan, specific plan, streetscape plan, or regulatory overlay that was adopted to support multimodal transportation options or public safety. LADOT staff should be consulted if a project would lead to a conflict with a mobility investment in the Public Right of Way (PROW) that is currently undergoing planning, design, or delivery. This worksheet must be completed for all projects that meet the Section I. Screening Criteria. For description of the relevant planning documents, **see Attachment D.1.**

For any response to the following questions that checks the box in bold text ((i.e. ☐ Yes or ☐ No), further analysis is needed to demonstrate that the project does not conflict with a plan, policy, or program.

I. SCREENING CRITERIA FOR POLICY ANALYSIS

If the answer is 'yes' to any of the following questions, further analysis will be required:

Does the project require a discretionary action that requires the decision maker to find that the project would substantially conform to the purpose, intent and provisions of the General Plan?

☑ Yes ☐ No

Is the project known to directly conflict with a transportation plan, policy, or program adopted to support multimodal transportation options or public safety?

☐ Yes ☑ No

Is the project required to or proposing to make any voluntary modifications to the public right-of-way (i.e., dedications and/or improvements in the right-of-way, reconfigurations of curb line, etc.)?

☑ Yes ☐ No

II. PLAN CONSISTENCY ANALYSIS

A. Mobility Plan 2035 PROW Classification Standards for Dedications and Improvements

These questions address potential conflict with:

Mobility Plan 2035 Policy 2.1 *– Adaptive Reuse of Streets. Design, plan, and operate streets to serve multiple purposes and provide flexibility in design to adapt to future demands.*

Mobility Plan 2035 Policy 2.3 *– Pedestrian Infrastructure. Recognize walking as a component of every trip, and ensure high quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.*

Mobility Plan 2035 Policy 3.2 – *People with Disabilities. Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.*

Mobility Plan 2035 Street Designations and Standard Roadway Dimensions

A.1 Does the project include additions or new construction along a street designated as a Boulevard I, and II, and/or Avenue I, II, or III on property zoned for R3 or less restrictive zone? ☐ Yes ☑ No

A.2 If **A.1 is yes**, is the project required to make additional dedications or improvements to the Public Right of Way as demonstrated by the street designation. ☐ Yes ☐ No ☑ N/A

A.3 If **A.2 is yes**, is the project making the dedications and improvements as necessary to meet the designated dimensions of the fronting street (Boulevard I, and II, or Avenue I, II, or III)?

☐ Yes ☐ No ☑ N/A

If the answer is to **A.1 or A.2 is NO, or to A.1, A.2 and A.3. is YES**, then the project does not conflict with the dedication and improvement requirements that are needed to comply with the Mobility Plan 2035 Street Designations and Standard Roadway Dimensions.

A.4 If the answer to **A.3. is NO**

☐ **Yes** ☐ **No** ☑ N/A

Lists any streets subject to dedications or voluntary dedications and include existing roadway and sidewalk widths, required roadway and sidewalk widths, and proposed roadway and sidewalk width or waivers.

Bellwood Avenue

Frontage 1 Existing PROW'/Curb' : Existing 48'/18' Required 50'/20' Proposed 50'/20'

Frontage 2 Existing PROW'/Curb' : Existing _____ Required _____ Proposed _____

Frontage 3 Existing PROW'/Curb' : Existing _____ Required _____ Proposed _____

Frontage 4 Existing PROW'/Curb' : Existing _____ Required _____ Proposed _____

If the answer to **A.4 is NO**, the project is inconsistent with Mobility Plan 2035 street designations and must file for a waiver of street dedication and improvement.

If the answer to **A.4 is YES**, additional analysis is necessary to determine if the dedication and/or improvements are necessary to meet the City's mobility needs for the next 20 years. The following factors may contribute to determine if the dedication or improvement is necessary:

Is the project site along any of the following networks identified in the City's Mobility Plan?

- Transit Enhanced Network
- Bicycle Enhanced Network
- Bicycle Lane Network
- Pedestrian Enhanced District
- Neighborhood Enhanced Network

To see the location of the above networks, see **Transportation Assessment Support Map.**[1]

Is the project within the service area of Metro Bike Share, or is there demonstrated demand for micro-mobility services?

If the project dedications and improvements asking to be waived are necessary to meet the City's mobility needs, the project may be found to conflict with a plan that is adopted to protect the environment.

B. Mobility Plan 2035 PROW Policy Alignment with Project-Initiated Changes

B.1 Project-Initiated Changes to the PROW Dimensions

These questions address potential conflict with:

Mobility Plan 2035 Policy 2.1 *– Adaptive Reuse of Streets. Design, plan, and operate streets to serve multiple purposes and provide flexibility in design to adapt to future demands.*

Mobility Plan 2035 Policy 2.3 *– Pedestrian Infrastructure. Recognize walking as a component of every trip, and ensure high quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.*

Mobility Plan 2035 Policy 3.2 – *People with Disabilities. Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.*

Mobility Plan 2035 Policy 2.10 *– Loading Areas. Facilitate the provision of adequate on and off-site street loading areas.*

Mobility Plan 2035 Street Designations and Standard Roadway Dimensions

[1] LADOT https://arcg.is/fubbD

B.1 Does the project physically modify the curb placement or turning radius and/or physically alter the sidewalk and parkways space that changes how people access a property?

Examples of physical changes to the public right-of-way include:

- widening the roadway,
- narrowing the sidewalk,
- adding space for vehicle turn outs or loading areas,
- removing bicycle lanes, bike share stations, or bicycle parking
- modifying existing bus stop, transit shelter, or other street furniture
- paving, narrowing, shifting or removing an existing parkway or

☑ **Yes** ☐ No

B.2 Driveway Access

These questions address potential conflict with:

Mobility Plan 2035 Policy 2.10 *– Loading Areas. Facilitate the provision of adequate on and off-site street loading areas.*

Mobility Plan 2035 Program PL.1. Driveway Access. *Require driveway access to buildings from non-arterial streets or alleys (where feasible) in order to minimize interference with pedestrian access and vehicular movement.*

Citywide Design Guidelines - Guideline 2*: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.*

Site Planning Best Practices:

- *Prioritize pedestrian access first and automobile access second. Orient parking and driveways toward the rear or side of buildings and away from the public right-of-way. On corner lots, parking should be oriented as far from the corner as possible.*
- *Minimize both the number of driveway entrances and overall driveway widths.*
- *Do not locate drop-off/pick-up areas between principal building entrances and the adjoining sidewalks.*
- *Orient vehicular access as far from street intersections as possible.*
- *Place drive-thru elements away from intersections and avoid placing them so that they create a barrier between the sidewalk and building entrance(s).*
- *Ensure that loading areas do not interfere with on-site pedestrian and vehicular circulation by separating loading areas and larger commercial vehicles from areas that are used for public parking and public entrances.*

B.2 Does the project add new driveways along a street designated as an Avenue or a Boulevard that conflict with LADOT's Driveway Design Guidelines (See Sec. 321 in the Manual of Policies and Procedures) by any of the following:

- locating new driveways for residential properties on an Avenue or Boulevard, and access is otherwise possible using an alley or a collector/local street, or
- locating new driveways for industrial or commercial properties on an Avenue or Boulevard and access is possible along a collector/local street, or

- the total number of new driveways exceeds 1 driveway per every 200 feet[2] along on the Avenue or Boulevard frontage, or
- locating new driveways on an Avenue or Boulevard within 150 feet from the intersecting street, or
- locating new driveways on a collector or local street within 75 feet from the intersecting street, or
- locating new driveways near mid-block crosswalks, requiring relocation of the mid-block

☐ **Yes** ☑ No

If the answer to **B.1 and B.2 are both NO**, then the project would not conflict with a plan or policies that govern the PROW as a result of the project-initiated changes to the PROW.

Impact Analysis

If the answer to either **B.1 or B.2 are YES**, City plans and policies should be reviewed in light of the proposed physical changes to determine if the City would be obstructed from carrying out the plans and policies. The analysis should pay special consideration to substantial changes to the Public Right of Way that may either degrade existing facilities for people walking and bicycling (e.g., removing a bicycle lane), or preclude the City from completing complete street infrastructure as identified in the Mobility Plan 2035, especially if the physical changes are along streets that are on the High Injury Network (HIN). The analysis should also consider if the project is in a Transit Oriented Community (TOC) area, and would degrade or inhibit trips made by biking, walking and/ or transit ridership. The streets that need special consideration are those that are included on the following networks identified in the Mobility Plan 2035, or the HIN:

- Transit Enhanced Network
- Bicycle Enhanced Network
- Bicycle Lane Network
- Pedestrian Enhanced District
- Neighborhood Enhanced Network
- High Injury Network

To see the location of the above networks, see **Transportation Assessment Support Map.**[3]

Once the project is reviewed relevant to plans and policies, and existing facilities that may be impacted by the project, the analysis will need to answer the following two questions in concluding if there is an impact due to plan inconsistency.

B.2.1 Would the physical changes in the public right of way or new driveways that conflict with LADOT's Driveway Design Guidelines degrade the experience of vulnerable roadway users such as modify, remove, or otherwise negatively impact existing bicycle, transit, and/or pedestrian

☐ **Yes** ☑ No ☐ N/A

[2] for a project frontage that exceeds 400 feet along an Avenue or Boulevard, the incremental additional driveway above 2 is more than 1 driveway for every 400 additional feet.

[3] LADOT https://arcg.is/fubbD

B.2.2 Would the physical modifications or new driveways that conflict with LADOT's Driveway Design Guidelines preclude the City from advancing the safety o

☐ **Yes** ☑ No ☐ N/A

B.2.1 or B.2.2 are YES, the project may conflict with the Mobility Plan 2035, and therefore conflict with a plan that is adopted to protect the environment. If either of the answers to both **B.2.1. or B.2.2. are NO**, then the project would not be shown to conflict with plans or policies that govern the Public Right-of-Way.

C. Network Access

C. 1 Alley, Street and Stairway Access

These questions address potential conflict with:

> ***Mobility Plan Policy 3.9*** *Increased Network Access: Discourage the vacation of public rights-of-way.*

C.1.1 Does the project propose to vacate or otherwise restrict public access to a street, alley, or public stairway?

☑ Yes ☐ No

C.1.2 If the answer to C.1.1 is Yes, will the project provide or maintain public access to people walking and biking on the street, alley or stairway?

☑ ☐ **No** ☐ N/A

C.2 New Cul-de-sacs

These questions address potential conflict with:

> ***Mobility Plan 2035 Policy 3.10*** *Cul-de-sacs: Discourage the use of cul-de-sacs that do not provide access for active transportation options.*

C.2.1 Does the project create a cul-de-sac or is the project located adjacent to an existing cul-de-sac?

☐ Yes ☑ No

C.2.2 If yes, will the cul-de-sac maintain convenient and direct public access to people walking and biking to the adjoining street network?

☐ ☐ **No** ☑ N/A

If the answers to either C.1.2 or C.2.2 are YES, then the project would not conflict with a plan or policies **C.1.2 or C.2.2 are NO**, the project may conflict with a plan or policies that governs multimodal access to a property. Further analysis must assess to the degree that pedestrians and bicyclists have sufficient public access to the transportation network.

D. Parking Supply and Transportation Demand Management

These questions address potential conflict with:

Mobility Plan 2035 Policy 3.8 *– Bicycle Parking, Provide bicyclists with convenient, secure and well maintained bicycle parking facilities.*

Mobility Plan 2035 Policy 4.8 – *Transportation Demand Management Strategies. Encourage greater utilization of Transportation Demand Management Strategies to reduce dependence on single-occupancy vehicles.*

Mobility Plan 2035 Policy 4.13 *– Parking and Land Use Management: Balance on-street and off-street parking supply with other transportation and land use objectives.*

D.1 Would the project propose a supply of onsite parking that exceeds the baseline amount[4] as required in the Los Angeles Municipal Code or a Specific plan, whichever requirement prevails?

☑ Yes ☐ No

D.2 If the answer to D.1. is YES, would the project propose to actively manage the demand of parking by independently pricing the supply to all users (e.g. parking cash-out), or for residential properties, unbundle the supply from the lease or sale of residential units?

☑ ☐ **No** ☐ N/A

D.2. is NO the project may conflict with parking management policies. Further analysis is needed to demonstrate how the supply of parking above city requirements will not result in additional (induced) drive-alone trips as compared to an alternative that provided no more parking than the baseline required by the LAMC or Specific Plan. If there is potential for the supply of parking to result in induced demand for drive-alone trips, the project should further explore transportation demand management (TDM) measures to further off-set the induced demands of driving and vehicle miles travelled (VMT) that may result from higher amounts of on-site parking. The TDM measures should specifically focus on strategies that encourage dynamic and context-sensitive pricing solutions and ensure the parking is efficiently allocated, such as providing real time information. Research has demonstrated that charging a user cost for parking or providing a 'cash-out' option in return for not using it is the most effective strategy to reduce the instances of drive-alone trips and increase non-auto mode share to further reduce VMT. To ensure the parking is efficiently managed and reduce the need to build parking for future uses, further strategies should include sharing parking with other properties and/or the general public.

D.3. Would the project provide the minimum on and off-site bicycle parking spaces as required by Section 12.21 A.16 of the LAMC?

☑ ☐ **No**

[4] The baseline parking is defined here as the default parking requirements in section 12.21 A.4 of the Los Angeles Municipal Code or any applicable Specific Plan, whichever prevails, for each applicable use not taking into consideration other parking incentives to reduce the amount of required parking.

D.4. Does the Project include more than 25,000 square feet of gross floor area construction of new non-residential gross floor?

☐ Yes ☑ No

D.5 If the answer to D.4. is YES, does the project comply with the City's TDM Ordinance in Section 12.26 J of the LAMC?

☐ ☐ **No** ☑ N/A

D.3. or D.5. is NO the project conflicts with LAMC code requirements of bicycle parking and TDM measures. If the project includes uses that require bicycle parking (Section 12.21 A.16) or TDM (Section 12.26 J), and the project does not comply with those Sections of the LAMC, further analysis is required to ensure that the project supports the intent of the two LAMC sections. To meet the intent of bicycle parking requirements, the analysis should identify how the project commits to providing safe access to those traveling by bicycle and accommodates storing their bicycle in locations that demonstrates priority over vehicle access.

Similarly, to meet the intent of the TDM requirements of Section 12.26 J of the LAMC, the analysis should identify how the project commits to providing effective strategies in either physical facilities or programs that encourage non-drive alone trips to and from the project site and changes in work schedule that move trips out of the peak period or eliminate them altogether (as in the case in telecommuting or compressed work weeks).

E. Consistency with Regional Plans

This section addresses potential inconsistencies with greenhouse gas (GHG) reduction targets forecasted in the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) / Sustainable Communities Strategy (SCS).

E.1 Does the Project or Plan apply one the City's efficiency-based impact thresholds (i.e. VMT per capita, VMT per employee, or VMT per service population) as discussed in Section 2.2.3 of the TAG?

☐ Yes ☑ No

E.2 If the Answer to E.1 is YES, does the Project or Plan result in a significant VMT impact?

☐ Yes ☐ No ☑ N/A

E.3 If the Answer to E.1 is NO, does the Project result in a net increase in VMT?

☐ Yes ☐ No ☑ N/A

If the Answer to E.2 or E.3 is NO, then the Project or Plan is shown to align with the long-term VMT and GHG reduction goals of SCAG's RTP/SCS.

E.4 If the Answer to E.2 or E.3 is YES, then further evaluation would be necessary to determine whether such a project or land use plan would be shown to be consistent with VMT and GHG reduction goals of the SCAG RTP/SCS. For the purpose of making a finding that a project is consistent with the GHG reduction targets forecasted in the SCAG RTP/SCS, the project analyst should consult Section 2.2.4 of the Transportation Assessment Guidelines (TAG). Section 2.2.4 provides the methodology for evaluating a land use project's cumulative impacts to VMT, and the appropriate reliance on SCAG's most recently adopted RTP/SCS in reaching that conclusion.

The analysis methods therein can further support findings that the project is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy for which the State Air Resources Board, pursuant to Section 65080(b)(2)(H) of the Government Code, has accepted a metropolitan planning organization's determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve the greenhouse gas emission reduction targets.

References

Street Standard Dimensions S-470-1 http://eng2.lacity.org/techdocs/stdplans/s-400/S-470-1_20151021_150849.pdf

Citywide Design Guidelines https://planning.lacity.org/odocument/f6608be7-d5fe-4187-bea6-20618eec5049/Citywide_Design_Guidelines.pdf

LADOT https://arcg.is/fubbD

Mobility Plan 2035 https://planning.lacity.org/odocument/523f2a95-9d72-41d7-aba5-1972f84c1d36/Mobility_Plan_2035.pdf

https://www.connectsocal.org/Pages/default.aspx

ATTACHMENT D.1: CITY PLAN, POLICIES AND GUIDELINES

The Transportation Element of the City's General Plan, Mobility Plan 2035, established the "Complete Streets Design Guide" as the City's document to guide the operations and design of streets and other public rights-of-way. It lays out a vision for designing safer, more vibrant streets that are accessible to people, no matter what their mode choice. As a living document, it is intended to be frequently updated as City departments identify and implement street standards and experiment with different configurations to promote complete streets. The guide is meant to be a toolkit that provides numerous examples of what is possible in the public right-of-way and that provides guidance on context-sensitive design.

The Plan for A Healthy Los Angeles (March 2015) includes policies directing several City departments to develop plans that promote active transportation and safety.

The City of Los Angeles Community Plans, which make up the Land Use Element of the City's General Plan, guide the physical development of neighborhoods by establishing the goals and policies for land use. The 35 Community Plans provide specific, neighborhood-level detail for land uses and the transportation network, relevant policies, and implementation strategies necessary to achieve General Plan and community-specific objectives.

The stated goal of Vision Zero is to eliminate traffic-related deaths in Los Angeles by 2025 through a number of strategies, including modifying the design of streets to increase the safety of vulnerable road users. Extensive crash data analysis is conducted on an ongoing basis to prioritize intersections and corridors for implementation of projects that will have the greatest effect on overall fatality reduction. The City designs and deploys Vision Zero Corridor Plans as part of the implementation of Vision Zero. If a project is proposed whose site lies on the High Injury Network (HIN), the applicant should consult with LADOT to inform the project's site plan and to determine appropriate improvements, whether by funding their implementation in full or by making a contribution toward their implementation.

The Citywide Design Guidelines (October 24, 2019) includes sections relevant to development projects where improvements are proposed within the public realm. Specifically, Guidelines one through three provide building design strategies that support the pedestrian experience. The Guidelines provide best practices in designing that apply in three spatial categories of site planning, building design and public right of way. The Guidelines should be followed to ensure that the project design supports pedestrian safety, access and comfort as they access to and from the building and the immediate public right of way.

The City's Transportation Demand Management (TDM) Ordinance (LA Municipal Code 12.26.J) requires certain projects to incorporate strategies that reduce drive-alone vehicle trips and improve access to destinations and services. The ordinance is revised and updated periodically and should be reviewed for application to specific projects as they are reviewed.

The City's LAMC Section 12.37 (Waivers of Dedication and Improvement) requires certain projects to dedicate and/or implement improvements within the public right-of-way to meet the street designation standards of the Mobility Plan 2035.

The Bureau of Engineering (BOE) Street Standard Dimensions S-470-1 provides the specific street widths and public right of way dimensions associated with the City's street standards.

Appendix D

VMT Analysis Worksheets

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: Senior Residential Living at the Bellwood

Scenario: Project

Address: 10366 W BELLWOOD AVE, 90064

Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

○ Yes ○ No

Existing Land Use

Land Use Type	Value	Unit
Housing | Multi-Family	112	DU
Housing | Multi-Family	112	

☐ Click here to add a single custom land use type (will be included in the above list)

Proposed Project Land Use

Land Use Type	Value	Unit
Housing | Multi-Family		DU
(custom) Eldercare | Daily	533	Trips
(custom) Eldercare | HBW-Attraction Split	45	Percent
(custom) Eldercare | HBO-Attraction Split	10	Percent
(custom) Eldercare | NHB-Attraction Split	20	Percent
(custom) Eldercare | HBW-Production Split	5	Percent
(custom) Eldercare | HBO-Production Split	10	Percent
(custom) Eldercare | NHB-Production Split	10	Percent
(custom) Eldercare | Daily	231	Residents
(custom) Eldercare | Daily	88	Employees
(custom) Eldercare | Daily	Non-Retail	Retail/Non-Re

☑ Click here to add a single custom land use type (will be included in the above list)

Project Screening Summary

Existing Land Use	Proposed Project
477 Daily Vehicle Trips	402 Daily Vehicle Trips
3,153 Daily VMT	3,192 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips	-75 Net Daily Trips
The net increase in daily VMT ≤ 0	39 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	0.000 ksf

The proposed project is not required to perform VMT analysis.

Measuring the Miles

12/15/2020

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

Project Information

Project: Senior Residential Living at the Bellwood

Scenario: Project

Address: 10366 W BELLWOOD AVE, 90064

Proposed Project Land Use Type	Value	Unit
(custom) Eldercare | Daily	533	Trips
(custom) Eldercare | HBW-Attraction Split	45	Percent
(custom) Eldercare | HBO-Attraction Split	10	Percent
(custom) Eldercare | NHB-Attraction Split	20	Percent
(custom) Eldercare | HBW-Production Split	5	Percent
(custom) Eldercare | HBO-Production Split	10	Percent
(custom) Eldercare | NHB-Production Split	10	Percent
(custom) Eldercare | Daily	231	Residents
(custom) Eldercare | Daily	88	Employees
(custom) Eldercare | Daily	Non-Retail	Retail/Non-Re

TDM Strategies

Select each section to show individual strategies

Use ☑ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No

A Parking

Reduce Parking Supply
- 100 — city code parking provision for the project site
- 74 — actual parking provision for the project site
- ☐ Proposed Prj ☐ Mitigation

Unbundle Parking
- monthly parking cost (dollar) for the project site
- ☐ Proposed Prj ☐ Mitigation

Parking Cash-Out
- 50 — percent of employees eligible
- ☐ Proposed Prj ☐ Mitigation

Price Workplace Parking
- 6.00 — daily parking charge (dollar)
- 50 — percent of employees subject to priced parking
- ☐ Proposed Prj ☐ Mitigation

Residential Area Parking Permits
- 200 — cost (dollar) of annual permit
- ☐ Proposed Prj ☐ Mitigation

B Transit

C Education & Encouragement

D Commute Trip Reductions

E Shared Mobility

F Bicycle Infrastructure

G Neighborhood Enhancement

Analysis Results

Proposed Project	With Mitigation
400 Daily Vehicle Trips	400 Daily Vehicle Trips
3,171 Daily VMT	3,171 Daily VMT
N/A Household VMT per Capita	N/A Household VMT per Capita
N/A Work VMT per Employee	N/A Work VMT per Employee

Significant VMT Impact?

Household: N/A Threshold = 7.4 15% Below APC	Household: N/A Threshold = 7.4 15% Below APC
Work: N/A Threshold = 11.1 15% Below APC	Work: N/A Threshold = 11.1 15% Below APC

Measuring the Miles

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: December 15, 2020
Project Name: Senior Residential Living at the Bellwooc
Project Scenario: Project
Project Address: 10366 W BELLWOOD AVE, 90064

Version 1.3

Project Information			
Land Use Type		**Value**	**Units**
Housing	*Single Family*	*0*	*DU*
	Multi Family	*0*	*DU*
	Townhouse	*0*	*DU*
	Hotel	*0*	*Rooms*
	Motel	*0*	*Rooms*
Affordable Housing	*Family*	*0*	*DU*
	Senior	*0*	*DU*
	Special Needs	*0*	*DU*
	Permanent Supportive	*0*	*DU*
Retail	*General Retail*	*0.000*	*ksf*
	Furniture Store	*0.000*	*ksf*
	Pharmacy/Drugstore	*0.000*	*ksf*
	Supermarket	*0.000*	*ksf*
	Bank	*0.000*	*ksf*
	Health Club	*0.000*	*ksf*
	High-Turnover Sit-Down Restaurant	*0.000*	*ksf*
	Fast-Food Restaurant	*0.000*	*ksf*
	Quality Restaurant	*0.000*	*ksf*
	Auto Repair	*0.000*	*ksf*
	Home Improvement	*0.000*	*ksf*
	Free-Standing Discount	*0.000*	*ksf*
	Movie Theater	*0*	*Seats*
Office	*General Office*	*0.000*	*ksf*
	Medical Office	*0.000*	*ksf*
Industrial	*Light Industrial*	*0.000*	*ksf*
	Manufacturing	*0.000*	*ksf*
	Warehousing/Self-Storage	*0.000*	*ksf*
School	*University*	*0*	*Students*
	High School	*0*	*Students*
	Middle School	*0*	*Students*
	Elementary	*0*	*Students*
	Private School (K-12)	*0*	*Students*

Other	Eldercare	533	Trips

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: December 15, 2020
Project Name: Senior Residential Living at the Bellwooc
Project Scenario: Project
Project Address: 10366 W BELLWOOD AVE, 90064

Version 1.3

Analysis Results			
Total Employees: 88			
Total Population: 231			
Proposed Project		***With Mitigation***	
400	**Daily Vehicle Trips**	**400**	**Daily Vehicle Trips**
3,171	**Daily VMT**	**3,171**	**Daily VMT**
N/A	**Household VMT per Capita**	**N/A**	**Household VMT per Capita**
N/A	**Work VMT per Employee**	**N/A**	**Work VMT per Employee**

Significant VMT Impact?			
APC: West Los Angeles			
Impact Threshold: 15% Below APC Average			
Household = 7.4			
Work = 11.1			
Proposed Project		***With Mitigation***	
VMT Threshold	**Impact**	**VMT Threshold**	**Impact**
Household > 7.4	N/A	Household > 7.4	N/A
Work > 11.1	N/A	Work > 11.1	N/A

TDM Strategy Inputs

Strategy Type		Description	Proposed Project	Mitigations
Parking	*Reduce parking supply*	*City code parking provision (spaces)*	*0*	*0*
		Actual parking provision (spaces)	*0*	*0*
	Unbundle parking	*Monthly cost for parking ($)*	*$0*	*$0*
	Parking cash-out	*Employees eligible (%)*	*0%*	*0%*
	Price workplace parking	*Daily parking charge ($)*	*$0.00*	*$0.00*
		Employees subject to priced parking (%)	*0%*	*0%*
	Residential area parking permits	*Cost of annual permit ($)*	*$0*	*$0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Transit	*Reduce transit headways*	*Reduction in headways (increase in frequency) (%)*	*0%*	*0%*
		Existing transit mode share (as a percent of total daily trips) (%)	*0%*	*0%*
		Lines within project site improved (<50%, >=50%)	*0*	*0*
	Implement neighborhood shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees and residents eligible (%)	*0%*	*0%*
	Transit subsidies	*Employees and residents eligible (%)*	*0%*	*0%*
		Amount of transit subsidy per passenger (daily equivalent) ($)	*$0.00*	*$0.00*
Education & Encouragement	*Voluntary travel behavior change program*	*Employees and residents participating (%)*	*0%*	*0%*
	Promotions and marketing	*Employees and residents participating (%)*	*0%*	*0%*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Commute Trip Reductions	*Required commute trip reduction program*	*Employees participating (%)*	*0%*	*0%*
	Alternative Work Schedules and Telecommute	*Employees participating (%)*	*0%*	*0%*
		Type of program	*0*	*0*
	Employer sponsored vanpool or shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees eligible (%)	*0%*	*0%*
		Employer size (small, medium, large)	*0*	*0*
	Ride-share program	*Employees eligible (%)*	*0%*	*0%*
Shared Mobility	*Car share*	*Car share project setting (Urban, Suburban, All Other)*	*0*	*0*
	Bike share	*Within 600 feet of existing bike share station - OR- implementing new bike share station (Yes/No)*	*0*	*0*
	School carpool program	*Level of implementation (Low, Medium, High)*	*0*	*0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Bicycle Infrastructure	*Implement/Improve on-street bicycle facility*	*Provide bicycle facility along site (Yes/No)*	*0*	*0*
	Include Bike parking per LAMC	Meets City Bike Parking Code (Yes/No)	Yes	Yes
	Include secure bike parking and showers	*Includes indoor bike parking/lockers, showers, & repair station (Yes/No)*	*0*	*0*
Neighborhood Enhancement	*Traffic calming improvements*	*Streets with traffic calming improvements (%)*	*0%*	*0%*
		Intersections with traffic calming improvements (%)	*0%*	*0%*
	Pedestrian network improvements	*Included (within project and connecting off-site/within project only)*	*0*	*0*

TDM Adjustments by Trip Purpose & Strategy

Place type: Compact Infill

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Parking	Reduce parking supply	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Parking sections 1 - 5
	Unbundle parking	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Parking cash-out	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Price workplace parking	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Residential area parking permits	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
Transit	Reduce transit headways	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Transit sections 1 - 3
	Implement neighborhood shuttle	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Transit subsidies	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
Education & Encouragement	Voluntary travel behavior change program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Education & Encouragement sections 1 - 2
	Promotions and marketing	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
Commute Trip Reductions	Required commute trip reduction program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Commute Trip Reductions sections 1 - 4
	Alternative Work Schedules and Telecommute Program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Employer sponsored vanpool or shuttle	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Ride-share program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
Shared Mobility	Car-share	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Shared Mobility sections 1 - 3
	Bike share	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
	School carpool program	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Compact Infill

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
	Include secure bike parking and showers	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	
Neighborhood Enhancement	Traffic calming improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Neighborhood Enhancement
	Pedestrian network improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	

Final Combined & Maximum TDM Effect

	Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*	
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*
MAX. TDM EFFECT	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*

= Minimum (X%, 1-[(1-A)*(1-B)…])

where X%=

PLACE	*urban*	*75%*
TYPE	compact infill	*40%*
MAX:	*suburban center*	*20%*
	suburban	*15%*

Note: (1-[(1-A)*(1-B)…]) reflects the dampened combined effectiveness of TDM Strategies (e.g., A, B,…). See the TDM Strategy Appendix (*Transportation Assessment Guidelines Attachment G)* for further discussion of dampening.

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: December 15, 2020
Project Name: Senior Residential Living at the Bellwooc
Project Scenario: Project
Project Address: 10366 W BELLWOOD AVE, 90064

Version 1.3

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	27	-44.4%	15	5.6	151	84
Home Based Other Production	53	-39.6%	32	4.9	260	157
Non-Home Based Other Production	53	-5.7%	50	8.1	429	405
Home-Based Work Attraction	240	-27.9%	173	8.6	2,064	1,488
Home-Based Other Attraction	53	-41.5%	31	8.4	445	260
Non-Home Based Other Attraction	107	-5.6%	101	7.9	845	798

MXD Methodology with TDM Measures

	Proposed Project			*Project with Mitigation Measures*		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-0.6%	15	83	-0.6%	15	83
Home Based Other Production	-0.6%	32	156	-0.6%	32	156
Non-Home Based Other Production	-0.6%	50	402	-0.6%	50	402
Home-Based Work Attraction	-0.6%	172	1,479	-0.6%	172	1,479
Home-Based Other Attraction	-0.6%	31	258	-0.6%	31	258
Non-Home Based Other Attraction	-0.6%	100	793	-0.6%	100	793

MXD VMT Methodology Per Capita & Per Employee

Total Population: 231
Total Employees: 88
APC: West Los Angeles

	Proposed Project	*Project with Mitigation Measures*
Total Home Based Production VMT	**239**	**239**
Total Home Based Work Attraction VMT	**1,479**	**1,479**
Total Home Based VMT Per Capita	**N/A**	**N/A**
Total Work Based VMT Per Employee	**N/A**	**N/A**

VMT Calculator User Agreement

The Los Angeles Department of Transportation (LADOT), in partnership with the Department of City Planning and Fehr & Peers, has developed the City of Los Angeles Vehicle Miles Traveled (VMT) Calculator to estimate project-specific daily household VMT per capita and daily work VMT per employee for land use development projects. This application, the VMT Calculator, has been provided to You, the User, to assess vehicle miles traveled (VMT) outcomes of land use projects within the City of Los Angeles. The term "City" as used below shall refer to the City of Los Angeles. The terms "City" and "Fehr & Peers" as used below shall include their respective affiliates, subconsultants, employees, and representatives.

The City is pleased to be able to provide this information to the public. The City believes that the public is most effectively served when they are provided access to the technical tools that inform the public review process of private and public land use investments. However, in using the VMT Calculator, You agree to be bound by this VMT Calculator User Agreement (this Agreement).

VMT Calculator Application for the City of Los Angeles. The City's consultant calibrated the VMT Calculator's parameters in 2018 to estimate travel patterns of locations in the City, and validated those outcomes against empirical data. However, this calibration process is limited to locations within the City, and practitioners applying the VMT Calculator outside of the City boundaries should not apply these estimates without further calibration and validation of travel patterns to verify the VMT Calculator's accuracy in estimating VMT in such other locations.

Limited License to Use. This Agreement gives You a limited, non-transferrable, non-assignable, and non-exclusive license to use and execute a copy of the VMT Calculator on a computer system owned, leased or otherwise controlled by You in Your own facilities, as set out below, provided You do not use the VMT Calculator in an unauthorized manner, and that You do not republish, copy, distribute, reverse-engineer, modify, decompile, disassemble, transfer, or sell any part of the VMT Calculator, and provided that You know and follow the terms of this Agreement. Your failure to follow the terms of this Agreement shall automatically terminate this license and Your right to use the VMT Calculator.

Ownership. You understand and acknowledge that the City owns the VMT Calculator, and shall continue to own it through Your use of it, and that no transfer of ownership of any kind is intended in allowing You to use the VMT Calculator.

Warranty Disclaimer. In spite of the efforts of the City and Fehr & Peers, some information on the VMT Calculator may not be accurate. The VMT Calculator, OUTPUTS AND ASSOCIATED DATA ARE PROVIDED "as is" WITHOUT WARRANTY OF ANY KIND, whether expressed, implied, statutory, or otherwise including but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

Limitation of Liability. It is understood that the VMT Calculator is provided without charge. Neither the City nor Fehr & Peers can be responsible or liable for any information derived from its use, or for any delays, inaccuracies, incompleteness, errors or omissions arising out of your use of the VMT Calculator or with respect to the material contained in the VMT Calculator. You understand and agree that Your sole remedy against the City or Fehr & Peers for loss or damage caused by any defect or failure of the

VMT Calculator, regardless of the form of action, whether in contract, tort, including negligence, strict liability or otherwise, shall be the repair or replacement of the VMT Calculator to the extent feasible as determined solely by the City. In no event shall the City or Fehr & Peers be responsible to You or anyone else for, or have liability for any special, indirect, incidental or consequential damages (including, without limitation, damages for loss of business profits or changes to businesses costs) or lost data or downtime, however caused, and on any theory of liability from the use of, or the inability to use, the VMT Calculator, whether the data, and/or formulas contained in the VMT Calculator are provided by the City or Fehr & Peers, or another third party, even if the City or Fehr & Peers have been advised of the possibility of such damages.

This Agreement and License shall be governed by the laws of the State of California without regard to their conflicts of law provisions, and shall be effective as of the date set forth below and, unless terminated in accordance with the above or extended by written amendment to this Agreement, shall terminate on the earlier of the date that You are not making use of the VMT Calculator or one year after the beginning of Your use of the VMT Calculator.

By using the VMT Calculator, You hereby waive and release all claims, responsibilities, liabilities, actions, damages, costs, and losses, known and unknown, against the City and Fehr & Peers for Your use of the VMT Calculator.

Before making decisions using the information provided in this application, contact City LADOT staff to confirm the validity of the data provided.

Print and sign below, and submit to LADOT along with the transportation assessment Memorandum of Understanding (MOU).

You, the User

By: _____

Print Name: _____

Title: _____

Company: _____

Address: _____

Phone: _____

Email Address: _____

Date: _____

Appendix E

HCM Analysis Worksheets

HCM 6th Signalized Intersection Summary
1: Beverly Glen Bl & Santa Monica Bl

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1812	0	174	1289	188	130	685	419	501	609	132
Future Volume (veh/h)	120	1812	0	174	1289	188	130	685	419	501	609	132
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	130	1970	0	189	1401	204	141	745	455	545	662	143
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	1787	0	144	1745	740	196	1128	503	432	1371	612
Arrive On Green	0.05	0.35	0.00	0.08	0.68	0.68	0.06	0.32	0.32	0.13	0.39	0.39
Sat Flow, veh/h	3456	5274	0	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	130	1970	0	189	1401	204	141	745	455	545	662	143
Grp Sat Flow(s),veh/h/ln	1728	1702	0	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.5	42.0	0.0	5.0	23.1	5.3	4.8	21.7	33.0	15.0	16.9	7.3
Cycle Q Clear(g_c), s	4.5	42.0	0.0	5.0	23.1	5.3	4.8	21.7	33.0	15.0	16.9	7.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	173	1787	0	144	1745	740	196	1128	503	432	1371	612
V/C Ratio(X)	0.75	1.10	0.00	1.31	0.80	0.28	0.72	0.66	0.90	1.26	0.48	0.23
Avail Cap(c_a), veh/h	173	1787	0	144	1745	740	259	1128	503	432	1371	612
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.92	0.92	0.92	0.13	0.13	0.13	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.3	39.0	0.0	55.0	16.2	8.9	55.7	35.4	39.2	52.5	27.8	24.9
Incr Delay (d2), s/veh	15.2	55.1	0.0	178.7	3.7	0.9	0.5	0.4	4.0	135.2	1.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	3.9	33.8	0.0	8.6	7.9	3.0	2.7	10.6	14.6	20.4	10.2	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.4	94.1	0.0	233.7	19.9	9.7	56.2	35.8	43.2	187.7	29.0	25.8
LnGrp LOS	E	F	A	F	B	A	E	D	D	F	C	C
Approach Vol, veh/h		2100			1794			1341			1350	
Approach Delay, s/veh		92.7			41.3			40.4			92.8	
Approach LOS		F			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	46.5	10.8	52.7	9.0	47.5	19.0	44.5
Change Period (Y+Rc), s	4.0	* 5.5	4.0	6.4	4.0	* 5.5	4.0	6.4
Max Green Setting (Gmax), s	6.0	* 41	9.0	44.1	5.0	* 42	15.0	38.1
Max Q Clear Time (g_c+I1), s	6.5	25.1	6.8	18.9	7.0	44.0	17.0	35.0
Green Ext Time (p_c), s	0.0	13.3	0.0	9.2	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	68.1
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2473	395	155	1476	163	193
Future Volume (veh/h)	2473	395	155	1476	163	193
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2688	429	168	1604	177	210
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	3381	1219	349	4119	369	298
Arrive On Green	0.66	0.66	0.10	0.81	0.11	0.11
Sat Flow, veh/h	5274	1585	3456	5274	3456	2790
Grp Volume(v), veh/h	2688	429	168	1604	177	210
Grp Sat Flow(s),veh/h/ln	1702	1585	1728	1702	1728	1395
Q Serve(g_s), s	45.1	10.3	5.5	10.6	5.8	8.7
Cycle Q Clear(g_c), s	45.1	10.3	5.5	10.6	5.8	8.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3381	1219	349	4119	369	298
V/C Ratio(X)	0.79	0.35	0.48	0.39	0.48	0.71
Avail Cap(c_a), veh/h	3464	1244	349	4119	369	298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.91	0.91	0.40	0.40
Uniform Delay (d), s/veh	14.5	4.4	51.0	3.3	50.5	51.8
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.3	1.8	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	17.1	5.6	4.0	4.5	3.7	8.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.6	4.4	51.9	3.5	52.3	57.3
LnGrp LOS	B	A	D	A	D	E
Approach Vol, veh/h	3117			1772	387	
Approach Delay, s/veh	13.2			8.1	55.0	
Approach LOS	B			A	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		102.0		18.0	17.3	84.7
Change Period (Y+Rc), s		* 5.2		* 5.2	* 5.2	* 5.2
Max Green Setting (Gmax), s		* 97		* 13	* 11	* 81
Max Q Clear Time (g_c+I1), s		12.6		10.7	7.5	47.1
Green Ext Time (p_c), s		26.7		0.4	0.2	32.4

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Traffic Volume (veh/h)	25	2043	582	635	1324	0	274	0	455	0	0
Future Volume (veh/h)	25	2043	582	635	1324	0	274	0	455	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach		No			No			No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870		
Adj Flow Rate, veh/h	27	2221	633	690	1439	0	298	298	495		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2		
Cap, veh/h	44	2482	769	1194	3702	0	500	500	1241		
Arrive On Green	0.02	0.39	0.39	0.35	0.72	0.00	0.10	0.10	0.10		
Sat Flow, veh/h	1781	6434	1585	3456	5274	0	5023	5023	2790		
Grp Volume(v), veh/h	27	2221	633	690	1439	0	298	298	495		
Grp Sat Flow(s),veh/h/ln	1781	1609	1585	1728	1702	0	1674	1674	1395		
Q Serve(g_s), s	1.8	38.9	41.1	19.6	13.0	0.0	6.8	6.8	0.0		
Cycle Q Clear(g_c), s	1.8	38.9	41.1	19.6	13.0	0.0	6.8	6.8	0.0		
Prop In Lane	1.00		1.00	1.00		0.00	1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	44	2482	769	1194	3702	0	500	500	1241		
V/C Ratio(X)	0.61	0.89	0.82	0.58	0.39	0.00	0.60	0.60	0.40		
Avail Cap(c_a), veh/h	91	2482	769	1194	3702	0	1134	1134	1594		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.57	0.57	0.57	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	57.9	34.6	26.5	32.1	6.3	0.0	51.7	51.7	22.5		
Incr Delay (d2), s/veh	7.6	3.3	5.8	0.7	0.3	0.0	1.1	1.1	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(85%),veh/ln	1.6	18.6	23.2	11.3	6.5	0.0	4.7	4.7	11.3		
Unsig. Movement Delay, s/veh											
LnGrp Delay(d),s/veh	65.6	37.8	32.2	32.8	6.6	0.0	52.9	52.9	22.7		
LnGrp LOS	E	D	C	C	A	A	D	D	C		
Approach Vol, veh/h		2881			2129		793	793			
Approach Delay, s/veh		36.9			15.1		34.0	34.0			
Approach LOS		D			B		C	C			

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	7.5	93.7		18.8	48.2	53.0
Change Period (Y+Rc), s	4.5	* 6.7		6.9	* 6.7	* 6.7
Max Green Setting (Gmax), s	6.1	* 69		27.1	* 27	* 46
Max Q Clear Time (g_c+I1), s	3.8	15.0		8.8	21.6	43.1
Green Ext Time (p_c), s	0.0	30.7		3.1	1.4	3.2

Intersection Summary	
HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	313	2258	84	38	1619	96	231	813	221	219	366	278
Future Volume (veh/h)	313	2258	84	38	1619	96	231	813	221	219	366	278
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	340	2454	91	41	1760	104	251	884	240	238	398	302
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	1917	71	179	1880	583	342	1010	538	242	1089	591
Arrive On Green	0.07	0.38	0.38	0.06	0.37	0.37	0.06	0.28	0.28	0.08	0.31	0.31
Sat Flow, veh/h	1781	5055	186	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	340	1647	898	41	1760	104	251	884	240	238	398	302
Grp Sat Flow(s),veh/h/ln	1781	1702	1837	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	6.0	34.1	34.1	1.2	29.9	4.0	5.0	21.3	10.6	7.0	7.9	13.3
Cycle Q Clear(g_c), s	6.0	34.1	34.1	1.2	29.9	4.0	5.0	21.3	10.6	7.0	7.9	13.3
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	1291	697	179	1880	583	342	1010	538	242	1089	591
V/C Ratio(X)	1.64	1.28	1.29	0.23	0.94	0.18	0.73	0.88	0.45	0.98	0.37	0.51
Avail Cap(c_a), veh/h	208	1291	697	179	1880	583	342	1066	564	242	1145	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	0.67	0.67	0.67
Uniform Delay (d), s/veh	24.3	27.9	27.9	21.4	27.4	19.2	27.6	30.7	23.1	27.9	24.4	21.9
Incr Delay (d2), s/veh	307.9	130.3	140.6	0.6	10.3	0.7	0.8	0.8	0.1	42.6	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	28.7	49.6	56.0	0.9	17.2	2.8	3.1	9.9	4.5	6.5	4.8	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	332.2	158.3	168.5	22.0	37.8	19.9	28.3	31.5	23.2	70.5	24.5	22.3
LnGrp LOS	F	F	F	C	D	B	C	C	C	E	C	C
Approach Vol, veh/h		2885			1905			1375			938	
Approach Delay, s/veh		182.0			36.5			29.5			35.5	
Approach LOS		F			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	38.2	9.0	32.8	9.0	39.2	11.0	30.8
Change Period (Y+Rc), s	4.0	* 5.1	4.0	* 5.2	4.0	* 5.1	4.0	* 5.2
Max Green Setting (Gmax), s	6.0	* 32	5.0	* 29	5.0	* 33	7.0	* 27
Max Q Clear Time (g_c+I1), s	8.0	31.9	7.0	15.3	3.2	36.1	9.0	23.3
Green Ext Time (p_c), s	0.0	0.0	0.0	3.2	0.0	0.0	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	94.1
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	631	2393	1786	263	80	111
Future Volume (veh/h)	631	2393	1786	263	80	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	686	2601	1941	286	87	121
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	653	3086	1895	588	960	1302
Arrive On Green	0.38	1.00	0.37	0.37	0.28	0.28
Sat Flow, veh/h	3456	5274	5274	1585	3456	2790
Grp Volume(v), veh/h	686	2601	1941	286	87	121
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1585	1728	1395
Q Serve(g_s), s	17.0	0.0	33.4	12.5	1.7	2.2
Cycle Q Clear(g_c), s	17.0	0.0	33.4	12.5	1.7	2.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	653	3086	1895	588	960	1302
V/C Ratio(X)	1.05	0.84	1.02	0.49	0.09	0.09
Avail Cap(c_a), veh/h	653	3086	1895	588	960	1302
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.93	0.93
Uniform Delay (d), s/veh	28.0	0.0	28.3	21.7	24.1	13.4
Incr Delay (d2), s/veh	49.4	3.0	27.1	2.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	13.1	1.5	22.4	7.3	1.3	3.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	77.4	3.0	55.4	24.6	24.3	13.5
LnGrp LOS	F	A	F	C	C	B
Approach Vol, veh/h		3287	2227		208	
Approach Delay, s/veh		18.5	51.4		18.0	
Approach LOS		B	D		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		60.2		29.8	21.0	39.2
Change Period (Y+Rc), s		* 5.8		* 4.8	4.0	* 5.8
Max Green Setting (Gmax), s		* 54		* 25	17.0	* 33
Max Q Clear Time (g_c+I1), s		2.0		4.2	19.0	35.4
Green Ext Time (p_c), s		40.1		0.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	31.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	687	1818	989	336	218	212
Future Volume (veh/h)	687	1818	989	336	218	212
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	747	1976	1075	365	237	230
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	524	3859	1104	370	460	678
Arrive On Green	0.29	0.76	0.28	0.28	0.13	0.13
Sat Flow, veh/h	1781	5274	2707	876	3456	1585
Grp Volume(v), veh/h	747	1976	726	714	237	230
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1713	1728	1585
Q Serve(g_s), s	26.5	13.9	36.3	37.3	5.7	8.7
Cycle Q Clear(g_c), s	26.5	13.9	36.3	37.3	5.7	8.7
Prop In Lane	1.00			0.51	1.00	1.00
Lane Grp Cap(c), veh/h	524	3859	750	723	460	678
V/C Ratio(X)	1.42	0.51	0.97	0.99	0.51	0.34
Avail Cap(c_a), veh/h	524	3859	750	723	806	837
HCM Platoon Ratio	1.00	1.00	0.67	0.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.52	0.52	0.95	0.95
Uniform Delay (d), s/veh	31.8	4.4	31.7	32.0	36.3	17.2
Incr Delay (d2), s/veh	201.8	0.5	17.1	21.2	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	56.3	5.6	22.9	23.4	4.0	12.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	233.6	4.9	48.8	53.2	37.1	17.5
LnGrp LOS	F	A	D	D	D	B
Approach Vol, veh/h		2723	1440		467	
Approach Delay, s/veh		67.6	51.0		27.5	
Approach LOS		E	D		C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	30.0	43.0		17.0		73.0
Change Period (Y+Rc), s	3.5	* 5		* 5		* 5
Max Green Setting (Gmax), s	26.5	* 29		* 21		* 59
Max Q Clear Time (g_c+I1), s	28.5	39.3		10.7		15.9
Green Ext Time (p_c), s	0.0	0.0		1.2		24.5

Intersection Summary	
HCM 6th Ctrl Delay	58.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	1851	20	14	1335	79	9	2	11	35	1	93
Future Volume (veh/h)	64	1851	20	14	1335	79	9	2	11	35	1	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	2012	22	15	1451	86	10	2	12	38	1	101
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	267	2881	31	137	1887	111	246	65	254	165	30	374
Arrive On Green	0.55	0.55	0.55	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	338	5207	57	208	3410	201	568	194	761	342	91	1121
Grp Volume(v), veh/h	70	1315	719	15	754	783	24	0	0	140	0	0
Grp Sat Flow(s),veh/h/ln	338	1702	1860	208	1777	1834	1523	0	0	1554	0	0
Q Serve(g_s), s	10.5	25.3	25.3	3.8	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	10.5	25.3	25.3	29.1	0.0	0.0	0.9	0.0	0.0	5.6	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.11	0.42		0.50	0.27		0.72
Lane Grp Cap(c), veh/h	267	1884	1029	137	983	1015	564	0	0	569	0	0
V/C Ratio(X)	0.26	0.70	0.70	0.11	0.77	0.77	0.04	0.00	0.00	0.25	0.00	0.00
Avail Cap(c_a), veh/h	267	1884	1029	137	983	1015	564	0	0	569	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	0.58	0.58	0.58	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.3	14.6	14.6	7.4	0.0	0.0	20.3	0.0	0.0	21.8	0.0	0.0
Incr Delay (d2), s/veh	2.0	1.9	3.4	0.9	3.4	3.4	0.1	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	1.6	12.3	13.8	0.3	1.7	1.7	0.6	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	16.5	18.0	8.4	3.4	3.4	20.4	0.0	0.0	22.1	0.0	0.0
LnGrp LOS	B	B	B	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h		2104			1552			24			140	
Approach Delay, s/veh		16.9			3.4			20.4			22.1	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	54.6	35.4	54.6	35.4
Change Period (Y+Rc), s	* 4.8	* 5.4	* 4.8	* 5.4
Max Green Setting (Gmax), s	* 50	* 30	* 50	* 30
Max Q Clear Time (g_c+I1), s	31.1	7.6	27.3	2.9
Green Ext Time (p_c), s	14.9	0.8	20.8	0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	306	1425	145	229	1006	340	248	0	1127	33	0	41
Future Volume (veh/h)	306	1425	145	229	1006	340	248	0	1127	33	0	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870
Adj Flow Rate, veh/h	333	1549	158	249	1093	370	270	0	1225	36	0	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	0	2	2	0	2
Cap, veh/h	367	2528	258	291	1861	630	277	0	0	277	0	0
Arrive On Green	0.27	0.71	0.71	0.16	0.49	0.49	0.16	0.00	0.00	0.16	0.00	0.00
Sat Flow, veh/h	1781	4708	480	1781	3769	1276	1781	270		1781	36	
Grp Volume(v), veh/h	333	1120	587	249	987	476	270	84.7		36	33.0	
Grp Sat Flow(s),veh/h/ln	1781	1702	1784	1781	1702	1641	1781	F		1781	C	
Q Serve(g_s), s	16.3	15.0	15.1	12.2	18.6	18.6	13.6			1.6		
Cycle Q Clear(g_c), s	16.3	15.0	15.1	12.2	18.6	18.6	13.6			1.6		
Prop In Lane	1.00		0.27	1.00		0.78	1.00			1.00		
Lane Grp Cap(c), veh/h	367	1828	958	291	1681	810	277			277		
V/C Ratio(X)	0.91	0.61	0.61	0.86	0.59	0.59	0.97			0.13		
Avail Cap(c_a), veh/h	416	1828	958	455	1681	810	277			277		
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	0.62	0.62	0.62	1.00	1.00	1.00	1.00			1.00		
Uniform Delay (d), s/veh	31.8	8.1	8.1	36.6	16.2	16.2	37.8			32.8		
Incr Delay (d2), s/veh	15.0	1.0	1.8	9.4	1.5	3.1	46.8			0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(85%),veh/ln	10.2	5.6	6.2	8.5	9.9	10.0	12.6			1.2		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	9.1	9.9	46.0	17.7	19.3	84.7			33.0		
LnGrp LOS	D	A	A	D	B	B	F			C		
Approach Vol, veh/h		2040			1712							
Approach Delay, s/veh		15.5			22.3							
Approach LOS		B			C							

Timer - Assigned Phs	1	2	3		5	6	7
Phs Duration (G+Y+Rc), s	22.6	49.4	18.0		18.7	53.3	18.0
Change Period (Y+Rc), s	4.0	* 5	4.0		4.0	* 5	4.0
Max Green Setting (Gmax), s	21.0	* 33	14.0		23.0	* 31	5.0
Max Q Clear Time (g_c+I1), s	18.3	20.6	15.6		14.2	17.1	3.6
Green Ext Time (p_c), s	0.3	7.8	0.0		0.5	9.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	1790	13	21	1859	18	4	1	15	9	0	45
Future Vol, veh/h	53	1790	13	21	1859	18	4	1	15	9	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	49	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	58	1946	14	23	2021	20	4	1	16	10	0	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2041	0	0	1960	0	0	2923	4156	980	2972	4153	1021
Stage 1	-	-	-	-	-	-	2069	2069	-	2077	2077	-
Stage 2	-	-	-	-	-	-	854	2087	-	895	2076	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	119	-	-	131	-	-	16	2	214	15	2	201
Stage 1	-	-	-	-	-	-	34	95	-	34	94	-
Stage 2	-	-	-	-	-	-	290	93	-	273	94	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	119	-	-	131	-	-	7	~ 1	214	-	1	201
Mov Cap-2 Maneuver	-	-	-	-	-	-	7	~ 1	-	-	1	-
Stage 1	-	-	-	-	-	-	17	49	-	17	77	-
Stage 2	-	-	-	-	-	-	181	77	-	126	48	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.4	$ 1014.8	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	12	119	-	-	131	-	-	-
HCM Lane V/C Ratio	1.812	0.484	-	-	0.174	-	-	-
HCM Control Delay (s)	$ 1014.8	60.8	-	-	38.2	-	-	-
HCM Lane LOS	F	F	-	-	E	-	-	-
HCM 95th %tile Q(veh)	3.5	2.2	-	-	0.6	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1784	4	6	1930	8	12
Future Vol, veh/h	1784	4	6	1930	8	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	86	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1939	4	7	2098	9	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1943	0	2794	972
Stage 1	-	-	-	-	1941	-
Stage 2	-	-	-	-	853	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	134	-	34	217
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	342	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	134	-	32	217
Mov Cap-2 Maneuver	-	-	-	-	54	-
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	324	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	51.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	98	-	-	134	-
HCM Lane V/C Ratio	0.222	-	-	0.049	-
HCM Control Delay (s)	51.9	-	-	33.2	-
HCM Lane LOS	F	-	-	D	-
HCM 95th %tile Q(veh)	0.8	-	-	0.2	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	20	0	0	20
Future Vol, veh/h	0	0	20	0	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	22	0	0	22

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	44	22	0	0	22	0
Stage 1	22	-	-	-	-	-
Stage 2	22	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	967	1055	-	-	1593	-
Stage 1	1001	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	967	1055	-	-	1593	-
Mov Cap-2 Maneuver	967	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	1001	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1593	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Beverly Glen Bl & Santa Monica Bl

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	1574	0	274	1780	508	113	662	143	315	978	53
Future Volume (veh/h)	189	1574	0	274	1780	508	113	662	143	315	978	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	205	1711	0	298	1935	552	123	720	155	342	1063	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	1745	0	288	1915	740	173	1128	503	317	1276	569
Arrive On Green	0.05	0.34	0.00	0.11	0.50	0.50	0.05	0.32	0.32	0.09	0.36	0.36
Sat Flow, veh/h	3456	5274	0	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	205	1711	0	298	1935	552	123	720	155	342	1063	58
Grp Sat Flow(s),veh/h/ln	1728	1702	0	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.0	39.8	0.0	10.0	45.0	33.3	4.2	20.8	8.9	11.0	32.8	2.9
Cycle Q Clear(g_c), s	6.0	39.8	0.0	10.0	45.0	33.3	4.2	20.8	8.9	11.0	32.8	2.9
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	173	1745	0	288	1915	740	173	1128	503	317	1276	569
V/C Ratio(X)	1.19	0.98	0.00	1.03	1.01	0.75	0.71	0.64	0.31	1.08	0.83	0.10
Avail Cap(c_a), veh/h	173	1745	0	288	1915	740	173	1128	503	317	1276	569
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.73	0.73	0.73	0.67	0.67	0.67	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.0	39.1	0.0	53.4	30.1	20.8	56.1	35.0	31.0	54.5	35.2	25.6
Incr Delay (d2), s/veh	127.5	17.4	0.0	54.6	20.2	5.0	7.7	1.9	1.1	73.4	6.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	8.6	23.7	0.0	8.7	24.1	14.8	3.2	11.8	5.2	11.3	19.2	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	184.5	56.6	0.0	107.9	50.3	25.8	63.8	36.9	32.0	127.9	41.6	25.9
LnGrp LOS	F	E	A	F	F	C	E	D	C	F	D	C
Approach Vol, veh/h		1916			2785			998			1463	
Approach Delay, s/veh		70.2			51.6			39.5			61.2	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	50.5	10.0	49.5	14.0	46.5	15.0	44.5
Change Period (Y+Rc), s	4.0	* 5.5	4.0	6.4	4.0	* 5.5	4.0	6.4
Max Green Setting (Gmax), s	6.0	* 45	6.0	43.1	10.0	* 41	11.0	38.1
Max Q Clear Time (g_c+I1), s	8.0	47.0	6.2	34.8	12.0	41.8	13.0	22.8
Green Ext Time (p_c), s	0.0	0.0	0.0	6.0	0.0	0.0	0.0	7.6

Intersection Summary	
HCM 6th Ctrl Delay	56.9
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1725	373	154	1866	580	292
Future Volume (veh/h)	1725	373	154	1866	580	292
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1875	405	167	2028	630	317
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2587	1240	282	3225	953	769
Arrive On Green	0.51	0.51	0.08	0.63	0.28	0.28
Sat Flow, veh/h	5274	1585	3456	5274	3456	2790
Grp Volume(v), veh/h	1875	405	167	2028	630	317
Grp Sat Flow(s),veh/h/ln	1702	1585	1728	1702	1728	1395
Q Serve(g_s), s	34.4	9.0	5.6	29.1	19.4	11.1
Cycle Q Clear(g_c), s	34.4	9.0	5.6	29.1	19.4	11.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2587	1240	282	3225	953	769
V/C Ratio(X)	0.72	0.33	0.59	0.63	0.66	0.41
Avail Cap(c_a), veh/h	2587	1240	317	3225	953	769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.21	0.21	0.68	0.68	0.79	0.79
Uniform Delay (d), s/veh	23.1	3.8	53.2	13.5	38.5	35.5
Incr Delay (d2), s/veh	0.4	0.1	0.8	0.6	2.9	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	15.2	8.7	3.8	13.5	11.3	12.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.5	4.0	54.0	14.1	41.3	36.8
LnGrp LOS	C	A	D	B	D	D
Approach Vol, veh/h	2280			2195	947	
Approach Delay, s/veh	20.0			17.2	39.8	
Approach LOS	B			B	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		81.0		39.0	15.0	66.0
Change Period (Y+Rc), s		* 5.2		5.9	* 5.2	* 5.2
Max Green Setting (Gmax), s		* 76		33.1	* 11	* 61
Max Q Clear Time (g_c+I1), s		31.1		21.4	7.6	36.4
Green Ext Time (p_c), s		29.8		4.2	0.0	20.0

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Traffic Volume (veh/h)	84	1570	418	341	1738	0	645	0	704	0	0
Future Volume (veh/h)	84	1570	418	341	1738	0	645	0	704	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach		No			No			No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870		
Adj Flow Rate, veh/h	91	1707	454	371	1889	0	701	701	765		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2		
Cap, veh/h	115	2751	978	739	3039	0	952	952	1125		
Arrive On Green	0.06	0.43	0.43	0.21	0.60	0.00	0.19	0.19	0.19		
Sat Flow, veh/h	1781	6434	1585	3456	5274	0	5023	5023	2790		
Grp Volume(v), veh/h	91	1707	454	371	1889	0	701	701	765		
Grp Sat Flow(s),veh/h/ln	1781	1609	1585	1728	1702	0	1674	1674	1395		
Q Serve(g_s), s	6.0	24.8	18.4	11.3	28.5	0.0	15.8	15.8	1.4		
Cycle Q Clear(g_c), s	6.0	24.8	18.4	11.3	28.5	0.0	15.8	15.8	1.4		
Prop In Lane	1.00		1.00	1.00		0.00	1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	115	2751	978	739	3039	0	952	952	1125		
V/C Ratio(X)	0.79	0.62	0.46	0.50	0.62	0.00	0.74	0.74	0.68		
Avail Cap(c_a), veh/h	200	2751	978	739	3039	0	1218	1218	1273		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.69	0.69	0.69	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	55.3	26.8	12.3	41.6	15.6	0.0	45.8	45.8	29.4		
Incr Delay (d2), s/veh	8.2	0.7	1.1	0.5	1.0	0.0	1.7	1.7	1.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(85%),veh/ln	4.5	12.2	13.4	7.2	14.3	0.0	9.4	9.4	17.1		
Unsig. Movement Delay, s/veh											
LnGrp Delay(d),s/veh	63.6	27.5	13.4	42.1	16.6	0.0	47.5	47.5	30.7		
LnGrp LOS	E	C	B	D	B	A	D	D	C		
Approach Vol, veh/h		2252			2260		1466	1466			
Approach Delay, s/veh		26.1			20.8		38.7	38.7			
Approach LOS		C			C		D	D			

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	12.2	78.1		29.7	32.3	58.0
Change Period (Y+Rc), s	4.5	* 6.7		6.9	* 6.7	* 6.7
Max Green Setting (Gmax), s	13.5	* 59		29.1	* 20	* 51
Max Q Clear Time (g_c+I1), s	8.0	30.5		17.8	13.3	26.8
Green Ext Time (p_c), s	0.1	24.8		5.0	0.8	22.0

Intersection Summary	
HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Beverly Glen Bl & Olympic Bl

04/08/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	1531	128	175	2184	88	178	625	89	281	771	192
Future Volume (veh/h)	205	1531	128	175	2184	88	178	625	89	281	771	192
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	223	1664	139	190	2374	96	193	679	97	305	838	209
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	1877	157	216	2569	104	213	968	538	269	1008	538
Arrive On Green	0.06	0.39	0.39	0.07	0.40	0.40	0.06	0.27	0.27	0.07	0.28	0.28
Sat Flow, veh/h	1781	4802	401	1781	6391	258	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	223	1179	624	190	1792	678	193	679	97	305	838	209
Grp Sat Flow(s),veh/h/ln	1781	1702	1798	1781	1609	1824	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.0	29.0	29.1	5.8	31.8	31.9	5.0	15.5	3.9	6.0	19.9	9.0
Cycle Q Clear(g_c), s	5.0	29.0	29.1	5.8	31.8	31.9	5.0	15.5	3.9	6.0	19.9	9.0
Prop In Lane	1.00		0.22	1.00		0.14	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	1331	703	216	1940	733	213	968	538	269	1008	538
V/C Ratio(X)	1.20	0.89	0.89	0.88	0.92	0.93	0.91	0.70	0.18	1.14	0.83	0.39
Avail Cap(c_a), veh/h	185	1331	703	216	1940	733	213	1106	599	269	1145	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.19	0.19	0.19	0.35	0.35	0.35
Uniform Delay (d), s/veh	24.8	25.5	25.6	21.4	25.6	25.6	30.7	29.4	20.9	31.7	30.2	22.6
Incr Delay (d2), s/veh	131.2	9.0	15.5	31.1	8.9	19.3	10.7	0.3	0.0	76.5	1.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	12.8	16.5	18.8	6.2	16.8	21.3	3.1	7.6	1.9	11.0	10.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	156.0	34.5	41.1	52.5	34.5	44.9	41.4	29.8	21.0	108.1	32.0	22.8
LnGrp LOS	F	C	D	D	C	D	D	C	C	F	C	C
Approach Vol, veh/h		2026			2660			969			1352	
Approach Delay, s/veh		49.9			38.4			31.2			47.7	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	41.3	9.0	30.7	10.0	40.3	10.0	29.7
Change Period (Y+Rc), s	4.0	* 5.1	4.0	* 5.2	4.0	* 5.1	4.0	* 5.2
Max Green Setting (Gmax), s	5.0	* 33	5.0	* 29	6.0	* 32	6.0	* 28
Max Q Clear Time (g_c+I1), s	7.0	33.9	7.0	21.9	7.8	31.1	8.0	17.5
Green Ext Time (p_c), s	0.0	0.0	0.0	3.6	0.0	0.5	0.0	3.7

Intersection Summary	
HCM 6th Ctrl Delay	42.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	214	1658	2050	179	239	335
Future Volume (veh/h)	214	1658	2050	179	239	335
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	233	1802	2228	195	260	364
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	269	3086	2462	764	960	992
Arrive On Green	0.16	1.00	0.48	0.48	0.28	0.28
Sat Flow, veh/h	3456	5274	5274	1585	3456	2790
Grp Volume(v), veh/h	233	1802	2228	195	260	364
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1585	1728	1395
Q Serve(g_s), s	5.9	0.0	36.1	6.5	5.3	8.7
Cycle Q Clear(g_c), s	5.9	0.0	36.1	6.5	5.3	8.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	269	3086	2462	764	960	992
V/C Ratio(X)	0.87	0.58	0.90	0.26	0.27	0.37
Avail Cap(c_a), veh/h	269	3086	2462	764	960	992
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.94	0.94
Uniform Delay (d), s/veh	37.5	0.0	21.4	13.8	25.4	21.5
Incr Delay (d2), s/veh	24.5	0.8	6.1	0.8	0.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	5.1	0.4	18.6	4.0	3.7	10.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	62.0	0.8	27.5	14.6	26.0	22.5
LnGrp LOS	E	A	C	B	C	C
Approach Vol, veh/h		2035	2423		624	
Approach Delay, s/veh		7.8	26.5		24.0	
Approach LOS		A	C		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		60.2		29.8	11.0	49.2
Change Period (Y+Rc), s		* 5.8		* 4.8	4.0	* 5.8
Max Green Setting (Gmax), s		* 54		* 25	7.0	* 43
Max Q Clear Time (g_c+I1), s		2.0		10.7	7.9	38.1
Green Ext Time (p_c), s		23.2		2.2	0.0	4.9

Intersection Summary	
HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	522	1015	1553	255	358	423
Future Volume (veh/h)	522	1015	1553	255	358	423
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	567	1103	1688	277	389	460
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	485	3369	1542	251	792	795
Arrive On Green	0.27	0.66	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1781	5274	4592	721	3456	1585
Grp Volume(v), veh/h	567	1103	1297	668	389	460
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1741	1728	1585
Q Serve(g_s), s	24.5	8.4	31.4	31.4	8.8	18.3
Cycle Q Clear(g_c), s	24.5	8.4	31.4	31.4	8.8	18.3
Prop In Lane	1.00			0.41	1.00	1.00
Lane Grp Cap(c), veh/h	485	3369	1187	607	792	795
V/C Ratio(X)	1.17	0.33	1.09	1.10	0.49	0.58
Avail Cap(c_a), veh/h	485	3369	1187	607	806	801
HCM Platoon Ratio	1.00	1.00	0.67	0.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.64	0.64	0.50	0.50
Uniform Delay (d), s/veh	32.8	6.6	34.5	34.5	30.1	15.8
Incr Delay (d2), s/veh	96.4	0.3	51.0	61.1	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	30.8	4.4	27.2	29.9	5.0	20.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	129.2	6.9	85.5	95.6	30.4	16.3
LnGrp LOS	F	A	F	F	C	B
Approach Vol, veh/h		1670	1965		849	
Approach Delay, s/veh		48.4	88.9		22.7	
Approach LOS		D	F		C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	28.0	36.4		25.6		64.4
Change Period (Y+Rc), s	3.5	* 5		* 5		* 5
Max Green Setting (Gmax), s	24.5	* 31		* 21		* 59
Max Q Clear Time (g_c+I1), s	26.5	33.4		20.3		10.4
Green Ext Time (p_c), s	0.0	0.0		0.3		10.5

Intersection Summary	
HCM 6th Ctrl Delay	61.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1297	54	55	1763	65	10	7	24	40	4	71
Future Volume (veh/h)	25	1297	54	55	1763	65	10	7	24	40	4	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	1410	59	60	1916	71	11	8	26	43	4	77
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	2781	116	217	2796	103	150	122	304	207	41	317
Arrive On Green	0.55	0.55	0.55	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	218	5026	210	361	5054	187	302	365	913	459	123	952
Grp Volume(v), veh/h	27	955	514	60	1290	697	45	0	0	124	0	0
Grp Sat Flow(s),veh/h/ln	218	1702	1833	361	1702	1837	1579	0	0	1534	0	0
Q Serve(g_s), s	5.7	15.7	15.7	6.7	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear(g_c), s	5.7	15.7	15.7	22.4	0.0	0.0	1.6	0.0	0.0	4.9	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.10	0.24		0.58	0.35		0.62
Lane Grp Cap(c), veh/h	201	1884	1014	217	1884	1016	576	0	0	565	0	0
V/C Ratio(X)	0.13	0.51	0.51	0.28	0.68	0.69	0.08	0.00	0.00	0.22	0.00	0.00
Avail Cap(c_a), veh/h	201	1884	1014	217	1884	1016	576	0	0	565	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	0.67	0.67	0.67	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.2	12.5	12.5	3.5	0.0	0.0	20.5	0.0	0.0	21.6	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.9	1.7	2.1	1.4	2.5	0.3	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	0.6	8.1	8.9	0.6	0.6	1.3	1.2	0.0	0.0	3.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	13.4	14.1	5.6	1.4	2.5	20.8	0.0	0.0	21.8	0.0	0.0
LnGrp LOS	B	B	B	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h		1496			2047			45			124	
Approach Delay, s/veh		13.6			1.9			20.8			21.8	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	54.6	35.4	54.6	35.4
Change Period (Y+Rc), s	* 4.8	* 5.4	* 4.8	* 5.4
Max Green Setting (Gmax), s	* 50	* 30	* 50	* 30
Max Q Clear Time (g_c+I1), s	24.4	6.9	17.7	3.6
Green Ext Time (p_c), s	22.2	0.7	23.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1108	183	431	1516	31	164	0	387	186	0	312
Future Volume (veh/h)	32	1108	183	431	1516	31	164	0	387	186	0	312
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870
Adj Flow Rate, veh/h	35	1204	199	468	1648	34	178	0	421	202	0	339
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	0	2	2	0	2
Cap, veh/h	58	2015	333	475	3557	73	236	0	0	236	0	0
Arrive On Green	0.01	0.15	0.15	0.27	0.69	0.69	0.13	0.00	0.00	0.13	0.00	0.00
Sat Flow, veh/h	1781	4414	729	1781	5149	106	1781	178		1781	202	
Grp Volume(v), veh/h	35	929	474	468	1089	593	178	50.6		202	63.4	
Grp Sat Flow(s),veh/h/ln	1781	1702	1739	1781	1702	1851	1781	D		1781	E	
Q Serve(g_s), s	1.8	22.9	22.9	23.5	13.1	13.1	8.7			10.0		
Cycle Q Clear(g_c), s	1.8	22.9	22.9	23.5	13.1	13.1	8.7			10.0		
Prop In Lane	1.00		0.42	1.00		0.06	1.00			1.00		
Lane Grp Cap(c), veh/h	58	1554	794	475	2352	1279	236			236		
V/C Ratio(X)	0.61	0.60	0.60	0.99	0.46	0.46	0.76			0.86		
Avail Cap(c_a), veh/h	119	1554	794	475	2352	1279	236			238		
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00			1.00		
Uniform Delay (d), s/veh	43.9	30.5	30.5	32.8	6.3	6.3	37.6			38.2		
Incr Delay (d2), s/veh	8.3	1.4	2.8	37.3	0.7	1.2	13.0			25.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(85%),veh/ln	1.6	13.8	14.4	18.7	6.2	6.9	6.8			8.5		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	31.9	33.3	70.1	7.0	7.5	50.6			63.4		
LnGrp LOS	D	C	C	E	A	A	D			E		
Approach Vol, veh/h		1438			2150							
Approach Delay, s/veh		32.9			20.9							
Approach LOS		C			C							

Timer - Assigned Phs	1	2	3		5	6	7
Phs Duration (G+Y+Rc), s	6.9	67.2	15.9		28.0	46.1	15.9
Change Period (Y+Rc), s	4.0	* 5	4.0		4.0	* 5	4.0
Max Green Setting (Gmax), s	6.0	* 45	10.0		24.0	* 27	12.0
Max Q Clear Time (g_c+I1), s	3.8	15.1	10.7		25.5	24.9	12.0
Green Ext Time (p_c), s	0.0	15.3	0.0		0.0	1.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	2288	15	8	2320	7	8	0	8	11	0	72
Future Vol, veh/h	70	2288	15	8	2320	7	8	0	8	11	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	49	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	2487	16	9	2522	8	9	0	9	12	0	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2530	0	0	2503	0	0	3674	5195	1252	3691	5199	1265
Stage 1	-	-	-	-	-	-	2647	2647	-	2544	2544	-
Stage 2	-	-	-	-	-	-	1027	2548	-	1147	2655	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	~ 67	-	-	69	-	-	~ 5	0	140	~ 5	0	138
Stage 1	-	-	-	-	-	-	13	48	-	15	54	-
Stage 2	-	-	-	-	-	-	226	54	-	190	47	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	~ 67	-	-	69	-	-	-	0	140	-	0	138
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	13	0	-	15	47	-
Stage 2	-	-	-	-	-	-	85	47	-	-	0	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	7.6	0.2		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	~ 67	-	-	69	-	-	-
HCM Lane V/C Ratio	-	1.136	-	-	0.126	-	-	-
HCM Control Delay (s)	-	257.7	-	-	64.6	-	-	-
HCM Lane LOS	-	F	-	-	F	-	-	-
HCM 95th %tile Q(veh)	-	5.9	-	-	0.4	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2285	5	28	2263	7	17
Future Vol, veh/h	2285	5	28	2263	7	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	86	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2484	5	30	2460	8	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2489	0	3531	1245
Stage 1	-	-	-	-	2487	-
Stage 2	-	-	-	-	1044	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	70	-	13	142
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	270	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	70	-	~ 7	142
Mov Cap-2 Maneuver	-	-	-	-	22	-
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	154	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	119.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	55	-	-	70	-
HCM Lane V/C Ratio	0.474	-	-	0.435	-
HCM Control Delay (s)	119.4	-	-	91.2	-
HCM Lane LOS	F	-	-	F	-
HCM 95th %tile Q(veh)	1.8	-	-	1.7	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	24	0	0	16
Future Vol, veh/h	0	0	24	0	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	26	0	0	17

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	43	26	0	0	26	0
Stage 1	26	-	-	-	-	-
Stage 2	17	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	968	1050	-	-	1588	-
Stage 1	997	-	-	-	-	-
Stage 2	1006	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	968	1050	-	-	1588	-
Mov Cap-2 Maneuver	968	-	-	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	1006	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1588	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Beverly Glen Bl & Santa Monica Bl

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1812	0	174	1289	187	127	684	419	501	610	132
Future Volume (veh/h)	120	1812	0	174	1289	187	127	684	419	501	610	132
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	130	1970	0	189	1401	203	138	743	455	545	663	143
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	1787	0	144	1745	740	193	1128	503	432	1374	613
Arrive On Green	0.05	0.35	0.00	0.08	0.68	0.68	0.06	0.32	0.32	0.13	0.39	0.39
Sat Flow, veh/h	3456	5274	0	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	130	1970	0	189	1401	203	138	743	455	545	663	143
Grp Sat Flow(s),veh/h/ln	1728	1702	0	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.5	42.0	0.0	5.0	23.1	5.3	4.7	21.7	33.0	15.0	16.9	7.3
Cycle Q Clear(g_c), s	4.5	42.0	0.0	5.0	23.1	5.3	4.7	21.7	33.0	15.0	16.9	7.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	173	1787	0	144	1745	740	193	1128	503	432	1374	613
V/C Ratio(X)	0.75	1.10	0.00	1.31	0.80	0.27	0.72	0.66	0.90	1.26	0.48	0.23
Avail Cap(c_a), veh/h	173	1787	0	144	1745	740	259	1128	503	432	1374	613
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.92	0.92	0.92	0.13	0.13	0.13	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.3	39.0	0.0	55.0	16.2	8.9	55.7	35.3	39.2	52.5	27.7	24.8
Incr Delay (d2), s/veh	15.2	55.1	0.0	178.7	3.7	0.8	0.4	0.4	4.0	135.2	1.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	3.9	33.8	0.0	8.6	7.9	3.0	2.6	10.5	14.6	20.4	10.2	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.4	94.1	0.0	233.7	19.9	9.7	56.1	35.7	43.2	187.7	29.0	25.7
LnGrp LOS	E	F	A	F	B	A	E	D	D	F	C	C
Approach Vol, veh/h		2100			1793			1336			1351	
Approach Delay, s/veh		92.7			41.3			40.4			92.7	
Approach LOS		F			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	46.5	10.7	52.8	9.0	47.5	19.0	44.5
Change Period (Y+Rc), s	4.0	* 5.5	4.0	6.4	4.0	* 5.5	4.0	6.4
Max Green Setting (Gmax), s	6.0	* 41	9.0	44.1	5.0	* 42	15.0	38.1
Max Q Clear Time (g_c+I1), s	6.5	25.1	6.7	18.9	7.0	44.0	17.0	35.0
Green Ext Time (p_c), s	0.0	13.3	0.0	9.2	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	68.1
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2473	395	156	1476	162	190
Future Volume (veh/h)	2473	395	156	1476	162	190
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2688	429	170	1604	176	207
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	3481	1254	253	4076	377	305
Arrive On Green	0.68	0.68	0.07	0.80	0.11	0.11
Sat Flow, veh/h	5274	1585	3456	5274	3456	2790
Grp Volume(v), veh/h	2688	429	170	1604	176	207
Grp Sat Flow(s),veh/h/ln	1702	1585	1728	1702	1728	1395
Q Serve(g_s), s	42.5	9.3	5.8	11.1	5.7	8.6
Cycle Q Clear(g_c), s	42.5	9.3	5.8	11.1	5.7	8.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3481	1254	253	4076	377	305
V/C Ratio(X)	0.77	0.34	0.67	0.39	0.47	0.68
Avail Cap(c_a), veh/h	3481	1254	288	4076	377	305
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.91	0.91	0.41	0.41
Uniform Delay (d), s/veh	12.8	3.6	54.2	3.6	50.2	51.4
Incr Delay (d2), s/veh	0.2	0.1	3.2	0.3	1.7	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	15.9	5.2	4.2	4.8	3.6	8.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.0	3.7	57.4	3.8	51.9	56.4
LnGrp LOS	B	A	E	A	D	E
Approach Vol, veh/h	3117			1774	383	
Approach Delay, s/veh	11.7			8.9	54.3	
Approach LOS	B			A	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		101.0		19.0	14.0	87.0
Change Period (Y+Rc), s		* 5.2		5.9	* 5.2	* 5.2
Max Green Setting (Gmax), s		* 96		13.1	* 10	* 82
Max Q Clear Time (g_c+I1), s		13.1		10.6	7.8	44.5
Green Ext Time (p_c), s		26.6		0.5	0.0	35.1

Intersection Summary	
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Traffic Volume (veh/h)	25	2040	582	635	1325	0	274	0	455	0	0
Future Volume (veh/h)	25	2040	582	635	1325	0	274	0	455	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach		No			No			No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870		
Adj Flow Rate, veh/h	27	2217	633	690	1440	0	298	298	495		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2		
Cap, veh/h	44	2482	769	1194	3702	0	500	500	1241		
Arrive On Green	0.01	0.13	0.13	0.35	0.72	0.00	0.10	0.10	0.10		
Sat Flow, veh/h	1781	6434	1585	3456	5274	0	5023	5023	2790		
Grp Volume(v), veh/h	27	2217	633	690	1440	0	298	298	495		
Grp Sat Flow(s),veh/h/ln	1781	1609	1585	1728	1702	0	1674	1674	1395		
Q Serve(g_s), s	1.8	40.7	40.4	19.6	13.0	0.0	6.8	6.8	0.0		
Cycle Q Clear(g_c), s	1.8	40.7	40.4	19.6	13.0	0.0	6.8	6.8	0.0		
Prop In Lane	1.00		1.00	1.00		0.00	1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	44	2482	769	1194	3702	0	500	500	1241		
V/C Ratio(X)	0.61	0.89	0.82	0.58	0.39	0.00	0.60	0.60	0.40		
Avail Cap(c_a), veh/h	74	2482	769	1194	3702	0	1134	1134	1594		
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.58	0.58	0.58	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	58.9	49.9	37.3	32.1	6.3	0.0	51.7	51.7	22.5		
Incr Delay (d2), s/veh	7.8	3.3	5.9	0.7	0.3	0.0	1.1	1.1	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(85%),veh/ln	1.7	21.5	25.4	11.3	6.5	0.0	4.7	4.7	11.3		
Unsig. Movement Delay, s/veh											
LnGrp Delay(d),s/veh	66.7	53.2	43.2	32.8	6.6	0.0	52.9	52.9	22.7		
LnGrp LOS	E	D	D	C	A	A	D	D	C		
Approach Vol, veh/h		2877			2130		793	793			
Approach Delay, s/veh		51.1			15.1		34.0	34.0			
Approach LOS		D			B		C	C			

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	7.5	93.7		18.8	48.2	53.0
Change Period (Y+Rc), s	4.5	* 6.7		6.9	* 6.7	* 6.7
Max Green Setting (Gmax), s	5.0	* 68		27.1	* 27	* 46
Max Q Clear Time (g_c+I1), s	3.8	15.0		8.8	21.6	42.7
Green Ext Time (p_c), s	0.0	30.6		3.1	1.4	3.6

Intersection Summary	
HCM 6th Ctrl Delay	35.6
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	313	2260	84	34	1614	92	231	813	223	221	366	278
Future Volume (veh/h)	313	2260	84	34	1614	92	231	813	223	221	366	278
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	340	2457	91	37	1754	100	251	884	242	240	398	302
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	1917	71	179	1880	583	342	1010	538	242	1089	591
Arrive On Green	0.07	0.38	0.38	0.06	0.37	0.37	0.06	0.28	0.28	0.08	0.31	0.31
Sat Flow, veh/h	1781	5055	186	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	340	1649	899	37	1754	100	251	884	242	240	398	302
Grp Sat Flow(s),veh/h/ln	1781	1702	1837	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	6.0	34.1	34.1	1.1	29.8	3.8	5.0	21.3	10.7	7.0	7.9	13.3
Cycle Q Clear(g_c), s	6.0	34.1	34.1	1.1	29.8	3.8	5.0	21.3	10.7	7.0	7.9	13.3
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	1291	697	179	1880	583	342	1010	538	242	1089	591
V/C Ratio(X)	1.63	1.28	1.29	0.21	0.93	0.17	0.73	0.88	0.45	0.99	0.37	0.51
Avail Cap(c_a), veh/h	208	1291	697	179	1880	583	342	1066	564	242	1145	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	0.67	0.67	0.67
Uniform Delay (d), s/veh	24.3	27.9	27.9	21.4	27.4	19.2	27.6	30.7	23.2	28.0	24.4	21.9
Incr Delay (d2), s/veh	306.2	131.0	141.3	0.6	10.0	0.6	0.8	0.8	0.1	44.9	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	28.6	49.8	56.2	0.8	17.0	2.7	3.1	9.9	4.5	6.7	4.8	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	330.5	159.0	169.2	21.9	37.4	19.8	28.3	31.5	23.2	72.9	24.5	22.3
LnGrp LOS	F	F	F	C	D	B	C	C	C	E	C	C
Approach Vol, veh/h		2888			1891			1377			940	
Approach Delay, s/veh		182.3			36.2			29.5			36.2	
Approach LOS		F			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	38.2	9.0	32.8	9.0	39.2	11.0	30.8
Change Period (Y+Rc), s	4.0	* 5.1	4.0	* 5.2	4.0	* 5.1	4.0	* 5.2
Max Green Setting (Gmax), s	6.0	* 32	5.0	* 29	5.0	* 33	7.0	* 27
Max Q Clear Time (g_c+I1), s	8.0	31.8	7.0	15.3	3.1	36.1	9.0	23.3
Green Ext Time (p_c), s	0.0	0.0	0.0	3.2	0.0	0.0	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	94.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	627	2384	1789	263	80	112
Future Volume (veh/h)	627	2384	1789	263	80	112
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	682	2591	1945	286	87	122
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	653	3086	1895	588	960	1302
Arrive On Green	0.38	1.00	0.37	0.37	0.28	0.28
Sat Flow, veh/h	3456	5274	5274	1585	3456	2790
Grp Volume(v), veh/h	682	2591	1945	286	87	122
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1585	1728	1395
Q Serve(g_s), s	17.0	0.0	33.4	12.5	1.7	2.2
Cycle Q Clear(g_c), s	17.0	0.0	33.4	12.5	1.7	2.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	653	3086	1895	588	960	1302
V/C Ratio(X)	1.04	0.84	1.03	0.49	0.09	0.09
Avail Cap(c_a), veh/h	653	3086	1895	588	960	1302
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.92	0.92
Uniform Delay (d), s/veh	28.0	0.0	28.3	21.7	24.1	13.4
Incr Delay (d2), s/veh	47.5	2.9	27.7	2.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	12.9	1.5	22.5	7.3	1.3	3.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	75.5	2.9	56.0	24.6	24.3	13.5
LnGrp LOS	F	A	F	C	C	B
Approach Vol, veh/h		3273	2231		209	
Approach Delay, s/veh		18.0	52.0		18.0	
Approach LOS		B	D		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		60.2		29.8	21.0	39.2
Change Period (Y+Rc), s		* 5.8		* 4.8	4.0	* 5.8
Max Green Setting (Gmax), s		* 54		* 25	17.0	* 33
Max Q Clear Time (g_c+I1), s		2.0		4.2	19.0	35.4
Green Ext Time (p_c), s		40.0		0.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	31.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	689	1818	989	337	218	208
Future Volume (veh/h)	689	1818	989	337	218	208
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	749	1976	1075	366	237	226
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	524	3867	1108	372	454	675
Arrive On Green	0.29	0.76	0.28	0.28	0.13	0.13
Sat Flow, veh/h	1781	5274	2705	877	3456	1585
Grp Volume(v), veh/h	749	1976	727	714	237	226
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1712	1728	1585
Q Serve(g_s), s	26.5	13.8	36.3	37.3	5.8	8.6
Cycle Q Clear(g_c), s	26.5	13.8	36.3	37.3	5.8	8.6
Prop In Lane	1.00			0.51	1.00	1.00
Lane Grp Cap(c), veh/h	524	3867	754	726	454	675
V/C Ratio(X)	1.43	0.51	0.96	0.98	0.52	0.33
Avail Cap(c_a), veh/h	524	3867	754	726	806	837
HCM Platoon Ratio	1.00	1.00	0.67	0.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.52	0.52	0.95	0.95
Uniform Delay (d), s/veh	31.8	4.3	31.5	31.9	36.4	17.3
Incr Delay (d2), s/veh	203.5	0.5	16.6	20.5	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	56.7	5.6	22.8	23.3	4.0	12.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	235.2	4.8	48.1	52.4	37.3	17.6
LnGrp LOS	F	A	D	D	D	B
Approach Vol, veh/h		2725	1441		463	
Approach Delay, s/veh		68.1	50.2		27.7	
Approach LOS		E	D		C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	30.0	43.2		16.8		73.2
Change Period (Y+Rc), s	3.5	* 5		* 5		* 5
Max Green Setting (Gmax), s	26.5	* 29		* 21		* 59
Max Q Clear Time (g_c+I1), s	28.5	39.3		10.6		15.8
Green Ext Time (p_c), s	0.0	0.0		1.2		24.5

Intersection Summary	
HCM 6th Ctrl Delay	58.5
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	1851	20	14	1336	80	9	2	11	35	1	93
Future Volume (veh/h)	64	1851	20	14	1336	80	9	2	11	35	1	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	2012	22	15	1452	87	10	2	12	38	1	101
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	2881	31	137	1885	113	246	65	254	165	30	374
Arrive On Green	0.55	0.55	0.55	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	337	5207	57	208	3407	203	568	194	761	342	91	1121
Grp Volume(v), veh/h	70	1315	719	15	755	784	24	0	0	140	0	0
Grp Sat Flow(s),veh/h/ln	337	1702	1860	208	1777	1834	1523	0	0	1554	0	0
Q Serve(g_s), s	10.5	25.3	25.3	3.8	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	10.5	25.3	25.3	29.1	0.0	0.0	0.9	0.0	0.0	5.6	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.11	0.42		0.50	0.27		0.72
Lane Grp Cap(c), veh/h	266	1884	1029	137	983	1015	564	0	0	569	0	0
V/C Ratio(X)	0.26	0.70	0.70	0.11	0.77	0.77	0.04	0.00	0.00	0.25	0.00	0.00
Avail Cap(c_a), veh/h	266	1884	1029	137	983	1015	564	0	0	569	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	0.50	0.50	0.50	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.3	14.6	14.6	7.4	0.0	0.0	20.3	0.0	0.0	21.8	0.0	0.0
Incr Delay (d2), s/veh	2.0	1.9	3.4	0.8	2.9	2.9	0.1	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	1.6	12.3	13.8	0.3	1.4	1.5	0.6	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	16.5	18.0	8.2	2.9	2.9	20.4	0.0	0.0	22.1	0.0	0.0
LnGrp LOS	B	B	B	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h		2104			1554			24			140	
Approach Delay, s/veh		16.9			3.0			20.4			22.1	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	54.6	35.4	54.6	35.4
Change Period (Y+Rc), s	* 4.8	* 5.4	* 4.8	* 5.4
Max Green Setting (Gmax), s	* 50	* 30	* 50	* 30
Max Q Clear Time (g_c+I1), s	31.1	7.6	27.3	2.9
Green Ext Time (p_c), s	14.9	0.8	20.8	0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	306	1425	145	228	1007	340	249	0	1127	33	0	41
Future Volume (veh/h)	306	1425	145	228	1007	340	249	0	1127	33	0	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870
Adj Flow Rate, veh/h	333	1549	158	248	1095	370	271	0	1225	36	0	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	0	2	2	0	2
Cap, veh/h	356	2453	250	284	1811	612	312	0	0	312	0	0
Arrive On Green	0.27	0.69	0.69	0.16	0.48	0.48	0.18	0.00	0.00	0.18	0.00	0.00
Sat Flow, veh/h	1781	4708	480	1781	3771	1274	1781	271		1781	36	
Grp Volume(v), veh/h	333	1120	587	248	988	477	271	48.3		36	31.4	
Grp Sat Flow(s),veh/h/ln	1781	1702	1784	1781	1702	1641	1781	D		1781	C	
Q Serve(g_s), s	16.4	16.2	16.2	12.2	19.1	19.1	13.3			1.5		
Cycle Q Clear(g_c), s	16.4	16.2	16.2	12.2	19.1	19.1	13.3			1.5		
Prop In Lane	1.00		0.27	1.00		0.78	1.00			1.00		
Lane Grp Cap(c), veh/h	356	1773	929	284	1635	788	312			312		
V/C Ratio(X)	0.93	0.63	0.63	0.87	0.60	0.60	0.87			0.12		
Avail Cap(c_a), veh/h	356	1773	929	317	1635	788	445			312		
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	0.62	0.62	0.62	1.00	1.00	1.00	1.00			1.00		
Uniform Delay (d), s/veh	32.5	9.1	9.1	36.9	17.1	17.1	36.1			31.2		
Incr Delay (d2), s/veh	22.7	1.1	2.0	21.1	1.7	3.4	12.2			0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(85%),veh/ln	11.1	6.1	6.7	9.6	10.2	10.4	9.4			1.2		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.2	10.2	11.1	58.1	18.8	20.5	48.3			31.4		
LnGrp LOS	E	B	B	E	B	C	D			C		
Approach Vol, veh/h		2040			1713							
Approach Delay, s/veh		17.8			25.0							
Approach LOS		B			C							

Timer - Assigned Phs	1	2	3		5	6	7
Phs Duration (G+Y+Rc), s	22.0	48.2	19.8		18.3	51.9	19.8
Change Period (Y+Rc), s	4.0	* 5	4.0		4.0	* 5	4.0
Max Green Setting (Gmax), s	18.0	* 28	22.5		16.0	* 30	5.0
Max Q Clear Time (g_c+I1), s	18.4	21.1	15.3		14.2	18.2	3.5
Green Ext Time (p_c), s	0.0	4.6	0.5		0.1	8.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	1790	20	24	1846	18	4	1	15	9	0	45
Future Vol, veh/h	53	1790	20	24	1846	18	4	1	15	9	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	49	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	58	1946	22	26	2007	20	4	1	16	10	0	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2027	0	0	1968	0	0	2928	4152	984	2964	4153	1014
Stage 1	-	-	-	-	-	-	2073	2073	-	2069	2069	-
Stage 2	-	-	-	-	-	-	855	2079	-	895	2084	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	121	-	-	130	-	-	16	2	213	15	2	203
Stage 1	-	-	-	-	-	-	34	95	-	34	95	-
Stage 2	-	-	-	-	-	-	289	94	-	273	93	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	121	-	-	130	-	-	7	~ 1	213	-	1	203
Mov Cap-2 Maneuver	-	-	-	-	-	-	7	~ 1	-	-	1	-
Stage 1	-	-	-	-	-	-	18	49	-	18	76	-
Stage 2	-	-	-	-	-	-	175	75	-	128	48	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.5	$ 1014.8	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	12	121	-	-	130	-	-	-
HCM Lane V/C Ratio	1.812	0.476	-	-	0.201	-	-	-
HCM Control Delay (s)	$ 1014.8	59.2	-	-	39.5	-	-	-
HCM Lane LOS	F	F	-	-	E	-	-	-
HCM 95th %tile Q(veh)	3.5	2.1	-	-	0.7	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1784	4	7	1933	0	0
Future Vol, veh/h	1784	4	7	1933	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	86	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1939	4	8	2101	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1943	0	2797	972
Stage 1	-	-	-	-	1941	-
Stage 2	-	-	-	-	856	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	134	-	34	217
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	341	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	134	-	32	217
Mov Cap-2 Maneuver	-	-	-	-	54	-
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	321	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	134	-
HCM Lane V/C Ratio	-	-	-	0.057	-
HCM Control Delay (s)	0	-	-	33.5	-
HCM Lane LOS	A	-	-	D	-
HCM 95th %tile Q(veh)	-	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	20	9	1	20
Future Vol, veh/h	0	0	20	9	1	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	22	10	1	22

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	51	27	0	0	32	0
Stage 1	27	-	-	-	-	-
Stage 2	24	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	958	1048	-	-	1580	-
Stage 1	996	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	957	1048	-	-	1580	-
Mov Cap-2 Maneuver	957	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1580	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	-	-	0	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Beverly Glen Bl & Santa Monica Bl

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	1574	0	274	1780	508	114	662	143	315	976	53
Future Volume (veh/h)	189	1574	0	274	1780	508	114	662	143	315	976	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	205	1711	0	298	1935	552	124	720	155	342	1061	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	1745	0	288	1915	740	173	1128	503	317	1276	569
Arrive On Green	0.05	0.34	0.00	0.11	0.50	0.50	0.05	0.32	0.32	0.09	0.36	0.36
Sat Flow, veh/h	3456	5274	0	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	205	1711	0	298	1935	552	124	720	155	342	1061	58
Grp Sat Flow(s),veh/h/ln	1728	1702	0	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.0	39.8	0.0	10.0	45.0	33.3	4.2	20.8	8.9	11.0	32.7	2.9
Cycle Q Clear(g_c), s	6.0	39.8	0.0	10.0	45.0	33.3	4.2	20.8	8.9	11.0	32.7	2.9
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	173	1745	0	288	1915	740	173	1128	503	317	1276	569
V/C Ratio(X)	1.19	0.98	0.00	1.03	1.01	0.75	0.72	0.64	0.31	1.08	0.83	0.10
Avail Cap(c_a), veh/h	173	1745	0	288	1915	740	173	1128	503	317	1276	569
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.73	0.73	0.73	0.64	0.64	0.64	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.0	39.1	0.0	53.4	30.1	20.8	56.2	35.0	31.0	54.5	35.1	25.6
Incr Delay (d2), s/veh	127.5	17.4	0.0	54.6	20.2	5.0	7.7	1.8	1.0	73.4	6.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	8.6	23.7	0.0	8.7	24.1	14.8	3.2	11.8	5.1	11.3	19.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	184.5	56.6	0.0	107.9	50.3	25.8	63.8	36.8	32.0	127.9	41.5	25.9
LnGrp LOS	F	E	A	F	F	C	E	D	C	F	D	C
Approach Vol, veh/h		1916			2785			999			1461	
Approach Delay, s/veh		70.2			51.6			39.4			61.1	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	50.5	10.0	49.5	14.0	46.5	15.0	44.5
Change Period (Y+Rc), s	4.0	* 5.5	4.0	6.4	4.0	* 5.5	4.0	6.4
Max Green Setting (Gmax), s	6.0	* 45	6.0	43.1	10.0	* 41	11.0	38.1
Max Q Clear Time (g_c+I1), s	8.0	47.0	6.2	34.7	12.0	41.8	13.0	22.8
Green Ext Time (p_c), s	0.0	0.0	0.0	6.1	0.0	0.0	0.0	7.6

Intersection Summary	
HCM 6th Ctrl Delay	56.8
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1725	373	152	1866	580	293
Future Volume (veh/h)	1725	373	152	1866	580	293
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1875	405	165	2028	630	318
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2630	1254	253	3225	953	769
Arrive On Green	0.51	0.51	0.07	0.63	0.28	0.28
Sat Flow, veh/h	5274	1585	3456	5274	3456	2790
Grp Volume(v), veh/h	1875	405	165	2028	630	318
Grp Sat Flow(s),veh/h/ln	1702	1585	1728	1702	1728	1395
Q Serve(g_s), s	33.8	8.6	5.6	29.1	19.4	11.2
Cycle Q Clear(g_c), s	33.8	8.6	5.6	29.1	19.4	11.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2630	1254	253	3225	953	769
V/C Ratio(X)	0.71	0.32	0.65	0.63	0.66	0.41
Avail Cap(c_a), veh/h	2630	1254	288	3225	953	769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.21	0.21	0.71	0.71	0.79	0.79
Uniform Delay (d), s/veh	22.3	3.5	54.1	13.5	38.5	35.5
Incr Delay (d2), s/veh	0.4	0.1	2.0	0.7	2.9	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	14.9	8.6	3.9	13.6	11.3	12.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.7	3.7	56.1	14.2	41.3	36.8
LnGrp LOS	C	A	E	B	D	D
Approach Vol, veh/h	2280			2193	948	
Approach Delay, s/veh	19.3			17.3	39.8	
Approach LOS	B			B	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		81.0		39.0	14.0	67.0
Change Period (Y+Rc), s		* 5.2		5.9	* 5.2	* 5.2
Max Green Setting (Gmax), s		* 76		33.1	* 10	* 62
Max Q Clear Time (g_c+I1), s		31.1		21.4	7.6	35.8
Green Ext Time (p_c), s		29.8		4.2	0.0	21.1

Intersection Summary	
HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Traffic Volume (veh/h)	84	1571	418	341	1736	0	645	0	704	0	0
Future Volume (veh/h)	84	1571	418	341	1736	0	645	0	704	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach		No			No			No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870		
Adj Flow Rate, veh/h	91	1708	454	371	1887	0	701	701	765		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2		
Cap, veh/h	74	2804	991	710	3155	0	952	952	1102		
Arrive On Green	0.01	0.14	0.14	0.21	0.62	0.00	0.19	0.19	0.19		
Sat Flow, veh/h	1781	6434	1585	3456	5274	0	5023	5023	2790		
Grp Volume(v), veh/h	91	1708	454	371	1887	0	701	701	765		
Grp Sat Flow(s),veh/h/ln	1781	1609	1585	1728	1702	0	1674	1674	1395		
Q Serve(g_s), s	5.0	29.9	21.6	11.5	26.9	0.0	15.8	15.8	2.8		
Cycle Q Clear(g_c), s	5.0	29.9	21.6	11.5	26.9	0.0	15.8	15.8	2.8		
Prop In Lane	1.00		1.00	1.00		0.00	1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	74	2804	991	710	3155	0	952	952	1102		
V/C Ratio(X)	1.23	0.61	0.46	0.52	0.60	0.00	0.74	0.74	0.69		
Avail Cap(c_a), veh/h	74	2804	991	710	3155	0	1218	1218	1250		
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.70	0.70	0.70	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	59.2	41.8	18.9	42.4	13.9	0.0	45.8	45.8	30.3		
Incr Delay (d2), s/veh	160.2	0.7	1.1	0.7	0.8	0.0	1.7	1.7	1.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(85%),veh/ln	8.1	16.2	17.4	7.3	13.4	0.0	9.4	9.4	17.6		
Unsig. Movement Delay, s/veh											
LnGrp Delay(d),s/veh	219.4	42.5	20.0	43.1	14.7	0.0	47.5	47.5	31.7		
LnGrp LOS	F	D	B	D	B	A	D	D	C		
Approach Vol, veh/h		2253			2258		1466	1466			
Approach Delay, s/veh		45.1			19.4		39.3	39.3			
Approach LOS		D			B		D	D			

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	9.5	80.8		29.7	31.3	59.0
Change Period (Y+Rc), s	4.5	* 6.7		6.9	* 6.7	* 6.7
Max Green Setting (Gmax), s	5.0	* 60		29.1	* 19	* 52
Max Q Clear Time (g_c+I1), s	7.0	28.9		17.8	13.5	31.9
Green Ext Time (p_c), s	0.0	26.8		5.0	0.7	18.6

Intersection Summary	
HCM 6th Ctrl Delay	34.0
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Beverly Glen Bl & Olympic Bl

04/08/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	1528	128	176	2185	89	178	625	86	278	771	192
Future Volume (veh/h)	205	1528	128	176	2185	89	178	625	86	278	771	192
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	223	1661	139	191	2375	97	193	679	93	302	838	209
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	1877	157	217	2568	105	213	929	520	279	1008	538
Arrive On Green	0.06	0.39	0.39	0.07	0.40	0.40	0.06	0.26	0.26	0.08	0.28	0.28
Sat Flow, veh/h	1781	4801	401	1781	6388	261	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	223	1177	623	191	1793	679	193	679	93	302	838	209
Grp Sat Flow(s),veh/h/ln	1781	1702	1798	1781	1609	1823	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.0	29.0	29.1	5.9	31.8	31.9	5.0	15.7	3.8	7.0	19.9	9.0
Cycle Q Clear(g_c), s	5.0	29.0	29.1	5.9	31.8	31.9	5.0	15.7	3.8	7.0	19.9	9.0
Prop In Lane	1.00		0.22	1.00		0.14	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	1331	703	217	1940	733	213	929	520	279	1008	538
V/C Ratio(X)	1.20	0.88	0.89	0.88	0.92	0.93	0.91	0.73	0.18	1.08	0.83	0.39
Avail Cap(c_a), veh/h	185	1331	703	217	1940	733	213	1066	581	279	1145	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.20	0.20	0.20	0.35	0.35	0.35
Uniform Delay (d), s/veh	24.8	25.5	25.5	21.4	25.6	25.6	31.2	30.4	21.6	30.7	30.2	22.6
Incr Delay (d2), s/veh	131.4	8.9	15.4	31.7	9.0	19.4	11.2	0.5	0.0	56.3	1.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	12.9	16.5	18.8	6.3	16.9	21.3	3.2	7.8	1.9	9.0	10.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	156.2	34.4	40.9	53.1	34.6	45.1	42.4	30.8	21.6	87.1	32.0	22.8
LnGrp LOS	F	C	D	D	C	D	D	C	C	F	C	C
Approach Vol, veh/h		2023			2663			965			1349	
Approach Delay, s/veh		49.8			38.6			32.2			42.9	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	41.3	9.0	30.7	10.0	40.3	11.0	28.7
Change Period (Y+Rc), s	4.0	* 5.1	4.0	* 5.2	4.0	* 5.1	4.0	* 5.2
Max Green Setting (Gmax), s	5.0	* 33	5.0	* 29	6.0	* 32	7.0	* 27
Max Q Clear Time (g_c+I1), s	7.0	33.9	7.0	21.9	7.9	31.1	9.0	17.7
Green Ext Time (p_c), s	0.0	0.0	0.0	3.6	0.0	0.6	0.0	3.4

Intersection Summary	
HCM 6th Ctrl Delay	41.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	215	1660	2046	179	239	333
Future Volume (veh/h)	215	1660	2046	179	239	333
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	234	1804	2224	195	260	362
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	269	3086	2462	764	960	992
Arrive On Green	0.16	1.00	0.48	0.48	0.28	0.28
Sat Flow, veh/h	3456	5274	5274	1585	3456	2790
Grp Volume(v), veh/h	234	1804	2224	195	260	362
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1585	1728	1395
Q Serve(g_s), s	6.0	0.0	36.0	6.5	5.3	8.6
Cycle Q Clear(g_c), s	6.0	0.0	36.0	6.5	5.3	8.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	269	3086	2462	764	960	992
V/C Ratio(X)	0.87	0.58	0.90	0.26	0.27	0.36
Avail Cap(c_a), veh/h	269	3086	2462	764	960	992
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.93	0.93
Uniform Delay (d), s/veh	37.6	0.0	21.4	13.8	25.4	21.5
Incr Delay (d2), s/veh	25.1	0.8	6.0	0.8	0.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	5.1	0.4	18.5	4.0	3.7	10.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	62.7	0.8	27.4	14.6	26.0	22.4
LnGrp LOS	E	A	C	B	C	C
Approach Vol, veh/h		2038	2419		622	
Approach Delay, s/veh		7.9	26.3		23.9	
Approach LOS		A	C		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		60.2		29.8	11.0	49.2
Change Period (Y+Rc), s		* 5.8		* 4.8	4.0	* 5.8
Max Green Setting (Gmax), s		* 54		* 25	7.0	* 43
Max Q Clear Time (g_c+I1), s		2.0		10.6	8.0	38.0
Green Ext Time (p_c), s		23.3		2.1	0.0	5.0

Intersection Summary	
HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	520	1015	1553	254	358	424
Future Volume (veh/h)	520	1015	1553	254	358	424
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	565	1103	1688	276	389	461
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	485	3367	1542	250	793	795
Arrive On Green	0.27	0.66	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1781	5274	4594	719	3456	1585
Grp Volume(v), veh/h	565	1103	1296	668	389	461
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1741	1728	1585
Q Serve(g_s), s	24.5	8.4	31.4	31.4	8.8	18.4
Cycle Q Clear(g_c), s	24.5	8.4	31.4	31.4	8.8	18.4
Prop In Lane	1.00			0.41	1.00	1.00
Lane Grp Cap(c), veh/h	485	3367	1186	606	793	795
V/C Ratio(X)	1.17	0.33	1.09	1.10	0.49	0.58
Avail Cap(c_a), veh/h	485	3367	1186	606	806	801
HCM Platoon Ratio	1.00	1.00	0.67	0.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.64	0.64	0.50	0.50
Uniform Delay (d), s/veh	32.8	6.7	34.5	34.5	30.1	15.8
Incr Delay (d2), s/veh	94.8	0.3	51.1	61.2	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	30.5	4.4	27.2	29.9	5.0	20.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	127.6	6.9	85.6	95.7	30.3	16.3
LnGrp LOS	F	A	F	F	C	B
Approach Vol, veh/h		1668	1964		850	
Approach Delay, s/veh		47.8	89.0		22.7	
Approach LOS		D	F		C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	28.0	36.4		25.6		64.4
Change Period (Y+Rc), s	3.5	* 5		* 5		* 5
Max Green Setting (Gmax), s	24.5	* 31		* 21		* 59
Max Q Clear Time (g_c+I1), s	26.5	33.4		20.4		10.4
Green Ext Time (p_c), s	0.0	0.0		0.3		10.5

Intersection Summary	
HCM 6th Ctrl Delay	61.1
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1297	54	55	1762	64	10	7	24	40	4	71
Future Volume (veh/h)	25	1297	54	55	1762	64	10	7	24	40	4	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	1410	59	60	1915	70	11	8	26	43	4	77
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	2781	116	217	2798	102	150	122	304	207	41	317
Arrive On Green	0.55	0.55	0.55	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	218	5026	210	361	5057	185	302	365	913	459	123	952
Grp Volume(v), veh/h	27	955	514	60	1288	697	45	0	0	124	0	0
Grp Sat Flow(s),veh/h/ln	218	1702	1833	361	1702	1837	1579	0	0	1534	0	0
Q Serve(g_s), s	5.7	15.7	15.7	6.7	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear(g_c), s	5.7	15.7	15.7	22.4	0.0	0.0	1.6	0.0	0.0	4.9	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.10	0.24		0.58	0.35		0.62
Lane Grp Cap(c), veh/h	201	1884	1014	217	1884	1017	576	0	0	565	0	0
V/C Ratio(X)	0.13	0.51	0.51	0.28	0.68	0.69	0.08	0.00	0.00	0.22	0.00	0.00
Avail Cap(c_a), veh/h	201	1884	1014	217	1884	1017	576	0	0	565	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	0.63	0.63	0.63	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.2	12.5	12.5	3.5	0.0	0.0	20.5	0.0	0.0	21.6	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.9	1.7	2.0	1.3	2.4	0.3	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	0.6	8.1	8.9	0.6	0.6	1.2	1.2	0.0	0.0	3.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	13.4	14.1	5.5	1.3	2.4	20.8	0.0	0.0	21.8	0.0	0.0
LnGrp LOS	B	B	B	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h		1496			2045			45			124	
Approach Delay, s/veh		13.6			1.8			20.8			21.8	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	54.6	35.4	54.6	35.4
Change Period (Y+Rc), s	* 4.8	* 5.4	* 4.8	* 5.4
Max Green Setting (Gmax), s	* 50	* 30	* 50	* 30
Max Q Clear Time (g_c+I1), s	24.4	6.9	17.7	3.6
Green Ext Time (p_c), s	22.2	0.7	23.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
8: Motor Ave & Pico Bl

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1108	183	431	1515	31	163	0	387	186	0	312
Future Volume (veh/h)	32	1108	183	431	1515	31	163	0	387	186	0	312
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870
Adj Flow Rate, veh/h	35	1204	199	468	1647	34	177	0	421	202	0	339
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	0	2	2	0	2
Cap, veh/h	58	2015	333	475	3557	73	236	0	0	236	0	0
Arrive On Green	0.01	0.15	0.15	0.27	0.69	0.69	0.13	0.00	0.00	0.13	0.00	0.00
Sat Flow, veh/h	1781	4414	729	1781	5149	106	1781	177		1781	202	
Grp Volume(v), veh/h	35	929	474	468	1089	592	177	50.2		202	63.4	
Grp Sat Flow(s),veh/h/ln	1781	1702	1739	1781	1702	1851	1781	D		1781	E	
Q Serve(g_s), s	1.8	22.9	22.9	23.5	13.1	13.1	8.6			10.0		
Cycle Q Clear(g_c), s	1.8	22.9	22.9	23.5	13.1	13.1	8.6			10.0		
Prop In Lane	1.00		0.42	1.00		0.06	1.00			1.00		
Lane Grp Cap(c), veh/h	58	1554	794	475	2352	1279	236			236		
V/C Ratio(X)	0.61	0.60	0.60	0.99	0.46	0.46	0.75			0.86		
Avail Cap(c_a), veh/h	119	1554	794	475	2352	1279	236			238		
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00			1.00		
Uniform Delay (d), s/veh	43.9	30.5	30.5	32.8	6.3	6.3	37.6			38.2		
Incr Delay (d2), s/veh	8.3	1.4	2.8	37.3	0.7	1.2	12.6			25.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(85%),veh/ln	1.6	13.8	14.4	18.7	6.2	6.9	6.7			8.5		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	31.9	33.3	70.1	7.0	7.5	50.2			63.4		
LnGrp LOS	D	C	C	E	A	A	D			E		
Approach Vol, veh/h		1438			2149							
Approach Delay, s/veh		32.9			20.9							
Approach LOS		C			C							

Timer - Assigned Phs	1	2	3		5	6	7
Phs Duration (G+Y+Rc), s	6.9	67.2	15.9		28.0	46.1	15.9
Change Period (Y+Rc), s	4.0	* 5	4.0		4.0	* 5	4.0
Max Green Setting (Gmax), s	6.0	* 45	10.0		24.0	* 27	12.0
Max Q Clear Time (g_c+I1), s	3.8	15.1	10.6		25.5	24.9	12.0
Green Ext Time (p_c), s	0.0	15.3	0.0		0.0	1.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	2288	5	4	2323	7	8	0	8	11	0	72
Future Vol, veh/h	70	2288	5	4	2323	7	8	0	8	11	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	49	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	2487	5	4	2525	8	9	0	9	12	0	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2533	0	0	2492	0	0	3660	5183	1246	3684	5181	1267
Stage 1	-	-	-	-	-	-	2642	2642	-	2537	2537	-
Stage 2	-	-	-	-	-	-	1018	2541	-	1147	2644	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	~ 67	-	-	70	-	-	~ 5	0	142	~ 5	0	137
Stage 1	-	-	-	-	-	-	13	48	-	15	54	-
Stage 2	-	-	-	-	-	-	229	54	-	190	48	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	~ 67	-	-	70	-	-	-	0	142	-	0	137
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	13	0	-	15	51	-
Stage 2	-	-	-	-	-	-	93	51	-	-	0	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	7.6	0.1		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	~ 67	-	-	70	-	-	-
HCM Lane V/C Ratio	-	1.136	-	-	0.062	-	-	-
HCM Control Delay (s)	-	257.7	-	-	59.8	-	-	-
HCM Lane LOS	-	F	-	-	F	-	-	-
HCM 95th %tile Q(veh)	-	5.9	-	-	0.2	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2285	5	26	2259	10	21
Future Vol, veh/h	2285	5	26	2259	10	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	86	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2484	5	28	2455	11	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2489	0	3525	1245
Stage 1	-	-	-	-	2487	-
Stage 2	-	-	-	-	1038	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	70	-	13	142
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	272	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	70	-	~ 8	142
Mov Cap-2 Maneuver	-	-	-	-	23	-
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	163	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	152.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	53	-	-	70	-
HCM Lane V/C Ratio	0.636	-	-	0.404	-
HCM Control Delay (s)	152.7	-	-	87.6	-
HCM Lane LOS	F	-	-	F	-
HCM 95th %tile Q(veh)	2.5	-	-	1.6	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	7	24	0	0	16
Future Vol, veh/h	0	7	24	0	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	26	0	0	17

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	43	26	0	0	26	0
Stage 1	26	-	-	-	-	-
Stage 2	17	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	968	1050	-	-	1588	-
Stage 1	997	-	-	-	-	-
Stage 2	1006	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	968	1050	-	-	1588	-
Mov Cap-2 Maneuver	968	-	-	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	1006	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1050	1588	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	-	-	8.5	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 6th Signalized Intersection Summary
1: Beverly Glen Bl & Santa Monica Bl

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	2075	0	188	1369	219	135	713	437	678	635	137
Future Volume (veh/h)	125	2075	0	188	1369	219	135	713	437	678	635	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	2255	0	204	1488	238	147	775	475	737	690	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	1745	0	144	1745	753	202	1128	503	461	1394	622
Arrive On Green	0.04	0.34	0.00	0.08	0.68	0.68	0.06	0.32	0.32	0.13	0.39	0.39
Sat Flow, veh/h	3456	5274	0	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	136	2255	0	204	1488	238	147	775	475	737	690	149
Grp Sat Flow(s),veh/h/ln	1728	1702	0	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.7	41.0	0.0	5.0	26.5	6.5	5.0	22.8	35.0	16.0	17.6	7.6
Cycle Q Clear(g_c), s	4.7	41.0	0.0	5.0	26.5	6.5	5.0	22.8	35.0	16.0	17.6	7.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	1745	0	144	1745	753	202	1128	503	461	1394	622
V/C Ratio(X)	0.94	1.29	0.00	1.42	0.85	0.32	0.73	0.69	0.94	1.60	0.49	0.24
Avail Cap(c_a), veh/h	144	1745	0	144	1745	753	259	1128	503	461	1394	622
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.90	0.90	0.90	0.11	0.11	0.11	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.4	39.5	0.0	55.0	16.7	8.8	55.6	35.7	39.9	52.0	27.5	24.4
Incr Delay (d2), s/veh	57.7	136.1	0.0	220.1	5.0	1.0	0.5	0.4	5.4	279.8	1.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	5.1	52.6	0.0	9.8	9.0	3.4	2.7	11.0	15.5	35.4	10.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	115.1	175.6	0.0	275.1	21.7	9.8	56.1	36.1	45.3	331.8	28.7	25.4
LnGrp LOS	F	F	A	F	C	A	E	D	D	F	C	C
Approach Vol, veh/h		2391			1930			1397			1576	
Approach Delay, s/veh		172.1			47.0			41.4			170.2	
Approach LOS		F			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	46.5	11.0	53.5	9.0	46.5	20.0	44.5
Change Period (Y+Rc), s	4.0	* 5.5	4.0	6.4	4.0	* 5.5	4.0	6.4
Max Green Setting (Gmax), s	5.0	* 41	9.0	45.1	5.0	* 41	16.0	38.1
Max Q Clear Time (g_c+I1), s	6.7	28.5	7.0	19.6	7.0	43.0	18.0	37.0
Green Ext Time (p_c), s	0.0	11.0	0.0	9.7	0.0	0.0	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	113.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2923	416	161	1587	171	207
Future Volume (veh/h)	2923	416	161	1587	171	207
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3177	452	175	1725	186	225
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	3651	1280	756	4989	320	258
Arrive On Green	0.71	0.71	0.22	0.98	0.09	0.09
Sat Flow, veh/h	5274	1585	3456	5274	3456	2790
Grp Volume(v), veh/h	3177	452	175	1725	186	225
Grp Sat Flow(s),veh/h/ln	1702	1585	1728	1702	1728	1395
Q Serve(g_s), s	56.3	9.2	5.0	1.4	6.2	9.6
Cycle Q Clear(g_c), s	56.3	9.2	5.0	1.4	6.2	9.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3651	1280	756	4989	320	258
V/C Ratio(X)	0.87	0.35	0.23	0.35	0.58	0.87
Avail Cap(c_a), veh/h	3651	1280	756	4989	320	258
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.89	0.89	0.31	0.31
Uniform Delay (d), s/veh	12.9	3.1	38.6	0.0	52.2	53.7
Incr Delay (d2), s/veh	0.3	0.1	0.1	0.2	2.4	12.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	19.9	4.8	3.6	0.1	3.8	9.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.2	3.2	38.6	0.2	54.6	65.9
LnGrp LOS	B	A	D	A	D	E
Approach Vol, veh/h	3629			1900	411	
Approach Delay, s/veh	11.9			3.8	60.8	
Approach LOS	B			A	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		122.6		17.0	31.6	91.0
Change Period (Y+Rc), s		* 5.2		5.9	* 5.2	* 5.2
Max Green Setting (Gmax), s		* 98		11.1	* 8	* 86
Max Q Clear Time (g_c+I1), s		3.4		11.6	7.0	58.3
Green Ext Time (p_c), s		31.8		0.0	0.0	27.1

Intersection Summary	
HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Traffic Volume (veh/h)	26	2135	953	817	1381	0	333	0	493	0	0
Future Volume (veh/h)	26	2135	953	817	1381	0	333	0	493	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach		No			No			No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870		
Adj Flow Rate, veh/h	28	2321	1036	888	1501	0	362	362	536		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2		
Cap, veh/h	45	2322	755	1225	3617	0	580	580	1311		
Arrive On Green	0.01	0.12	0.12	0.35	0.71	0.00	0.12	0.12	0.12		
Sat Flow, veh/h	1781	6434	1585	3456	5274	0	5023	5023	2790		
Grp Volume(v), veh/h	28	2321	1036	888	1501	0	362	362	536		
Grp Sat Flow(s),veh/h/ln	1781	1609	1585	1728	1702	0	1674	1674	1395		
Q Serve(g_s), s	1.9	43.3	43.3	26.8	14.6	0.0	8.2	8.2	0.0		
Cycle Q Clear(g_c), s	1.9	43.3	43.3	26.8	14.6	0.0	8.2	8.2	0.0		
Prop In Lane	1.00		1.00	1.00		0.00	1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	45	2322	755	1225	3617	0	580	580	1311		
V/C Ratio(X)	0.62	1.00	1.37	0.72	0.41	0.00	0.62	0.62	0.41		
Avail Cap(c_a), veh/h	92	2322	755	1225	3617	0	1218	1218	1666		
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.40	0.40	0.40	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	58.9	52.8	38.3	33.6	7.2	0.0	50.6	50.6	20.9		
Incr Delay (d2), s/veh	5.5	11.8	171.0	2.2	0.4	0.0	1.1	1.1	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(85%),veh/ln	1.6	23.6	79.1	15.0	7.3	0.0	5.5	5.5	12.1		
Unsig. Movement Delay, s/veh											
LnGrp Delay(d),s/veh	64.4	64.6	209.3	35.8	7.6	0.0	51.7	51.7	21.1		
LnGrp LOS	E	E	F	D	A	A	D	D	C		
Approach Vol, veh/h		3385			2389		898	898			
Approach Delay, s/veh		108.9			18.1		33.4	33.4			
Approach LOS		F			B		C	C			

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	7.5	91.7		20.8	49.2	50.0
Change Period (Y+Rc), s	4.5	* 6.7		6.9	* 6.7	* 6.7
Max Green Setting (Gmax), s	6.2	* 67		29.1	* 28	* 43
Max Q Clear Time (g_c+I1), s	3.9	16.6		10.2	28.8	45.3
Green Ext Time (p_c), s	0.0	31.0		3.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	66.2
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	2415	87	40	1699	100	240	847	230	239	392	313
Future Volume (veh/h)	326	2415	87	40	1699	100	240	847	230	239	392	313
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	354	2625	95	43	1847	109	261	921	250	260	426	340
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	1890	68	179	1794	557	332	1030	547	238	1109	618
Arrive On Green	0.08	0.37	0.37	0.06	0.35	0.35	0.06	0.29	0.29	0.08	0.31	0.31
Sat Flow, veh/h	1781	5060	182	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	354	1758	962	43	1847	109	261	921	250	260	426	340
Grp Sat Flow(s),veh/h/ln	1781	1702	1838	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.0	33.6	33.6	1.3	31.6	4.3	5.0	22.4	11.0	7.0	8.4	15.0
Cycle Q Clear(g_c), s	7.0	33.6	33.6	1.3	31.6	4.3	5.0	22.4	11.0	7.0	8.4	15.0
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	1272	686	179	1794	557	332	1030	547	238	1109	618
V/C Ratio(X)	1.62	1.38	1.40	0.24	1.03	0.20	0.79	0.89	0.46	1.09	0.38	0.55
Avail Cap(c_a), veh/h	219	1272	686	179	1794	557	332	1066	564	238	1145	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	0.62	0.62	0.62
Uniform Delay (d), s/veh	22.7	28.2	28.2	21.8	29.2	20.3	28.4	30.6	22.9	27.7	24.2	21.3
Incr Delay (d2), s/veh	299.0	177.2	189.2	0.7	29.2	0.8	1.2	1.0	0.1	72.5	0.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	29.6	61.5	69.5	1.0	21.9	3.0	3.6	10.4	4.6	9.0	5.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	321.7	205.4	217.4	22.5	58.4	21.1	29.6	31.7	23.0	100.2	24.3	21.9
LnGrp LOS	F	F	F	C	F	C	C	C	C	F	C	C
Approach Vol, veh/h		3074			1999			1432			1026	
Approach Delay, s/veh		222.6			55.6			29.8			42.8	
Approach LOS		F			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	36.7	9.0	33.3	9.0	38.7	11.0	31.3
Change Period (Y+Rc), s	4.0	* 5.1	4.0	* 5.2	4.0	* 5.1	4.0	* 5.2
Max Green Setting (Gmax), s	7.0	* 31	5.0	* 29	5.0	* 33	7.0	* 27
Max Q Clear Time (g_c+I1), s	9.0	33.6	7.0	17.0	3.3	35.6	9.0	24.4
Green Ext Time (p_c), s	0.0	0.0	0.0	3.3	0.0	0.0	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	117.1
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	664	2559	1870	275	86	119
Future Volume (veh/h)	664	2559	1870	275	86	119
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	722	2782	2033	299	93	129
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	653	3086	1895	588	960	1302
Arrive On Green	0.38	1.00	0.37	0.37	0.28	0.28
Sat Flow, veh/h	3456	5274	5274	1585	3456	2790
Grp Volume(v), veh/h	722	2782	2033	299	93	129
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1585	1728	1395
Q Serve(g_s), s	17.0	0.0	33.4	13.2	1.8	2.3
Cycle Q Clear(g_c), s	17.0	0.0	33.4	13.2	1.8	2.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	653	3086	1895	588	960	1302
V/C Ratio(X)	1.11	0.90	1.07	0.51	0.10	0.10
Avail Cap(c_a), veh/h	653	3086	1895	588	960	1302
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.89	0.89
Uniform Delay (d), s/veh	28.0	0.0	28.3	21.9	24.1	13.4
Incr Delay (d2), s/veh	67.9	4.8	43.4	3.1	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	15.5	2.5	26.4	7.6	1.3	4.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	95.9	4.8	71.7	25.1	24.3	13.6
LnGrp LOS	F	A	F	C	C	B
Approach Vol, veh/h		3504	2332		222	
Approach Delay, s/veh		23.6	65.7		18.1	
Approach LOS		C	E		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		60.2		29.8	21.0	39.2
Change Period (Y+Rc), s		* 5.8		* 4.8	4.0	* 5.8
Max Green Setting (Gmax), s		* 54		* 25	17.0	* 33
Max Q Clear Time (g_c+I1), s		2.0		4.3	19.0	35.4
Green Ext Time (p_c), s		43.1		0.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	715	2185	1063	351	236	223
Future Volume (veh/h)	715	2185	1063	351	236	223
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	777	2375	1155	382	257	242
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	505	3821	1124	365	486	672
Arrive On Green	0.28	0.75	0.29	0.29	0.14	0.14
Sat Flow, veh/h	1781	5274	2731	856	3456	1585
Grp Volume(v), veh/h	777	2375	771	766	257	242
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1716	1728	1585
Q Serve(g_s), s	25.5	19.7	38.3	38.3	6.2	9.3
Cycle Q Clear(g_c), s	25.5	19.7	38.3	38.3	6.2	9.3
Prop In Lane	1.00			0.50	1.00	1.00
Lane Grp Cap(c), veh/h	505	3821	757	731	486	672
V/C Ratio(X)	1.54	0.62	1.02	1.05	0.53	0.36
Avail Cap(c_a), veh/h	505	3821	757	731	806	819
HCM Platoon Ratio	1.00	1.00	0.67	0.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.43	0.43	0.94	0.94
Uniform Delay (d), s/veh	32.3	5.3	32.2	32.2	35.9	17.6
Incr Delay (d2), s/veh	252.6	0.8	26.2	35.4	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	65.2	7.7	26.0	27.8	4.3	12.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	284.8	6.1	58.3	67.6	36.8	17.9
LnGrp LOS	F	A	F	F	D	B
Approach Vol, veh/h		3152	1537		499	
Approach Delay, s/veh		74.8	62.9		27.6	
Approach LOS		E	E		C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	29.0	43.3		17.7		72.3
Change Period (Y+Rc), s	3.5	* 5		* 5		* 5
Max Green Setting (Gmax), s	25.5	* 30		* 21		* 59
Max Q Clear Time (g_c+I1), s	27.5	40.3		11.3		21.7
Green Ext Time (p_c), s	0.0	0.0		1.3		28.0

Intersection Summary	
HCM 6th Ctrl Delay	66.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	2228	21	15	1424	82	9	2	11	36	1	97
Future Volume (veh/h)	67	2228	21	15	1424	82	9	2	11	36	1	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	2422	23	16	1548	89	10	2	12	39	1	105
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	2886	27	103	1890	108	246	65	254	163	30	375
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	307	5216	49	139	3416	196	568	194	762	338	91	1125
Grp Volume(v), veh/h	73	1579	866	16	802	835	24	0	0	145	0	0
Grp Sat Flow(s),veh/h/ln	307	1702	1861	139	1777	1835	1523	0	0	1554	0	0
Q Serve(g_s), s	16.2	34.8	34.9	9.8	33.0	33.6	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	49.8	34.8	34.9	44.7	33.0	33.6	0.9	0.0	0.0	5.8	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.11	0.42		0.50	0.27		0.72
Lane Grp Cap(c), veh/h	135	1884	1030	103	983	1015	564	0	0	569	0	0
V/C Ratio(X)	0.54	0.84	0.84	0.16	0.82	0.82	0.04	0.00	0.00	0.25	0.00	0.00
Avail Cap(c_a), veh/h	135	1884	1030	103	983	1015	564	0	0	569	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	0.50	0.50	0.50	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	38.9	16.7	16.8	35.5	16.4	16.5	20.3	0.0	0.0	21.9	0.0	0.0
Incr Delay (d2), s/veh	11.1	3.5	6.3	1.6	3.9	3.9	0.1	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	3.3	16.4	18.7	0.7	15.8	16.5	0.6	0.0	0.0	3.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	20.3	23.1	37.1	20.2	20.4	20.4	0.0	0.0	22.2	0.0	0.0
LnGrp LOS	D	C	C	D	C	C	C	A	A	C	A	A
Approach Vol, veh/h		2518			1653			24			145	
Approach Delay, s/veh		22.1			20.5			20.4			22.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	54.6	35.4	54.6	35.4
Change Period (Y+Rc), s	* 4.8	* 5.4	* 4.8	* 5.4
Max Green Setting (Gmax), s	* 50	* 30	* 50	* 30
Max Q Clear Time (g_c+I1), s	46.7	7.8	51.8	2.9
Green Ext Time (p_c), s	2.9	0.8	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	21.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	318	1783	154	258	1081	354	259	0	1329	34	0	43
Future Volume (veh/h)	318	1783	154	258	1081	354	259	0	1329	34	0	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870
Adj Flow Rate, veh/h	346	1938	167	280	1175	385	282	0	1445	37	0	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	0	2	2	0	2
Cap, veh/h	378	2746	235	315	2047	670	231	0	0	231	0	0
Arrive On Green	0.21	0.57	0.57	0.18	0.54	0.54	0.13	0.00	0.00	0.13	0.00	0.00
Sat Flow, veh/h	1781	4790	410	1781	3804	1246	1781	282		1781	37	
Grp Volume(v), veh/h	346	1374	731	280	1051	509	282	179.0		37	42.1	
Grp Sat Flow(s),veh/h/ln	1781	1702	1796	1781	1702	1646	1781	F		1781	D	
Q Serve(g_s), s	20.5	31.2	31.6	16.6	22.3	22.3	14.0			2.0		
Cycle Q Clear(g_c), s	20.5	31.2	31.6	16.6	22.3	22.3	14.0			2.0		
Prop In Lane	1.00		0.23	1.00		0.76	1.00			1.00		
Lane Grp Cap(c), veh/h	378	1952	1030	315	1831	886	231			231		
V/C Ratio(X)	0.92	0.70	0.71	0.89	0.57	0.57	1.22			0.16		
Avail Cap(c_a), veh/h	429	1952	1030	429	1831	886	231			231		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	0.37	0.37	0.37	1.00	1.00	1.00	1.00			1.00		
Uniform Delay (d), s/veh	41.6	16.5	16.6	43.4	16.7	16.7	47.0			41.8		
Incr Delay (d2), s/veh	10.5	0.8	1.6	15.9	1.3	2.7	132.0			0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(85%),veh/ln	12.0	13.8	14.9	11.7	11.7	11.8	20.2			1.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	17.3	18.1	59.4	18.0	19.4	179.0			42.1		
LnGrp LOS	D	B	B	E	B	B	F			D		
Approach Vol, veh/h		2451			1840							
Approach Delay, s/veh		22.5			24.7							
Approach LOS		C			C							

Timer - Assigned Phs	1	2	3		5	6	7
Phs Duration (G+Y+Rc), s	26.9	63.1	18.0		23.1	66.9	18.0
Change Period (Y+Rc), s	4.0	* 5	4.0		4.0	* 5	4.0
Max Green Setting (Gmax), s	26.0	* 37	14.0		26.0	* 37	14.0
Max Q Clear Time (g_c+I1), s	22.5	24.3	16.0		18.6	33.6	4.0
Green Ext Time (p_c), s	0.4	8.3	0.0		0.5	3.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	16.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	1939	14	22	1948	19	4	1	16	9	0	47
Future Vol, veh/h	55	1939	14	22	1948	19	4	1	16	9	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	49	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	2108	15	24	2117	21	4	1	17	10	0	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2138	0	0	2123	0	0	3131	4422	1062	3140	4419	1069
Stage 1	-	-	-	-	-	-	2236	2236	-	2176	2176	-
Stage 2	-	-	-	-	-	-	895	2186	-	964	2243	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	106	-	-	108	-	-	12	~ 1	189	12	1	187
Stage 1	-	-	-	-	-	-	26	78	-	29	84	-
Stage 2	-	-	-	-	-	-	273	83	-	248	77	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	106	-	-	108	-	-	~ 4	0	189	~ 5	0	187
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 4	0	-	~ 5	0	-
Stage 1	-	-	-	-	-	-	11	34	-	13	65	-
Stage 2	-	-	-	-	-	-	154	65	-	95	33	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	0.5	$ 608.5	$ 884.2
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	18	106	-	-	108	-	-	27
HCM Lane V/C Ratio	1.268	0.564	-	-	0.221	-	-	2.254
HCM Control Delay (s)	$ 608.5	75.9	-	-	47.6	-	-	$ 884.2
HCM Lane LOS	F	F	-	-	E	-	-	F
HCM 95th %tile Q(veh)	3.2	2.7	-	-	0.8	-	-	7.3

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1932	4	6	2022	8	12
Future Vol, veh/h	1932	4	6	2022	8	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	86	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2100	4	7	2198	9	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2104	0	2995	1052
Stage 1	-	-	-	-	2102	-
Stage 2	-	-	-	-	893	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	111	-	26	191
Stage 1	-	-	-	-	49	-
Stage 2	-	-	-	-	326	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	111	-	24	191
Mov Cap-2 Maneuver	-	-	-	-	43	-
Stage 1	-	-	-	-	49	-
Stage 2	-	-	-	-	305	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	66
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	80	-	-	111	-
HCM Lane V/C Ratio	0.272	-	-	0.059	-
HCM Control Delay (s)	66	-	-	39.4	-
HCM Lane LOS	F	-	-	E	-
HCM 95th %tile Q(veh)	1	-	-	0.2	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	21	0	0	21
Future Vol, veh/h	0	0	21	0	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	23	0	0	23

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	46	23	0	0	23	0
Stage 1	23	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	964	1054	-	-	1592	-
Stage 1	1000	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	964	1054	-	-	1592	-
Mov Cap-2 Maneuver	964	-	-	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	1000	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1592	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Beverly Glen Bl & Santa Monica Bl

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	1717	0	299	2030	664	118	689	151	385	1021	55
Future Volume (veh/h)	197	1717	0	299	2030	664	118	689	151	385	1021	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	214	1866	0	325	2207	722	128	749	164	418	1110	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	1787	0	230	1915	753	144	1128	503	346	1336	596
Arrive On Green	0.04	0.35	0.00	0.09	0.50	0.50	0.04	0.32	0.32	0.10	0.38	0.38
Sat Flow, veh/h	3456	5274	0	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	214	1866	0	325	2207	722	128	749	164	418	1110	60
Grp Sat Flow(s),veh/h/ln	1728	1702	0	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	5.0	42.0	0.0	8.0	45.0	45.0	4.4	21.9	9.5	12.0	34.0	2.9
Cycle Q Clear(g_c), s	5.0	42.0	0.0	8.0	45.0	45.0	4.4	21.9	9.5	12.0	34.0	2.9
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	1787	0	230	1915	753	144	1128	503	346	1336	596
V/C Ratio(X)	1.49	1.04	0.00	1.41	1.15	0.96	0.89	0.66	0.33	1.21	0.83	0.10
Avail Cap(c_a), veh/h	144	1787	0	230	1915	753	144	1128	503	346	1336	596
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.58	0.58	0.58	0.62	0.62	0.62	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	39.0	0.0	54.7	30.1	25.3	57.2	35.4	31.2	54.0	34.0	24.3
Incr Delay (d2), s/veh	252.0	33.8	0.0	199.3	72.6	16.9	30.6	1.9	1.1	118.3	6.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	11.0	28.6	0.0	13.6	36.9	25.9	3.8	12.3	5.4	15.4	19.7	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	309.5	72.8	0.0	253.9	102.6	42.2	87.8	37.3	32.2	172.3	40.1	24.6
LnGrp LOS	F	F	A	F	F	D	F	D	C	F	D	C
Approach Vol, veh/h		2080			3254			1041			1588	
Approach Delay, s/veh		97.2			104.4			42.7			74.3	
Approach LOS		F			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	50.5	9.0	51.5	12.0	47.5	16.0	44.5
Change Period (Y+Rc), s	4.0	* 5.5	4.0	6.4	4.0	* 5.5	4.0	6.4
Max Green Setting (Gmax), s	5.0	* 45	5.0	45.1	8.0	* 42	12.0	38.1
Max Q Clear Time (g_c+I1), s	7.0	47.0	6.4	36.0	10.0	44.0	14.0	23.9
Green Ext Time (p_c), s	0.0	0.0	0.0	6.7	0.0	0.0	0.0	7.5

Intersection Summary	
HCM 6th Ctrl Delay	88.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1928	390	160	2270	608	307
Future Volume (veh/h)	1928	390	160	2270	608	307
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2096	424	174	2467	661	334
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2553	1216	334	3268	924	746
Arrive On Green	0.50	0.50	0.10	0.64	0.27	0.27
Sat Flow, veh/h	5274	1585	3456	5274	3456	2790
Grp Volume(v), veh/h	2096	424	174	2467	661	334
Grp Sat Flow(s),veh/h/ln	1702	1585	1728	1702	1728	1395
Q Serve(g_s), s	41.8	10.2	5.7	40.4	20.8	12.0
Cycle Q Clear(g_c), s	41.8	10.2	5.7	40.4	20.8	12.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2553	1216	334	3268	924	746
V/C Ratio(X)	0.82	0.35	0.52	0.75	0.72	0.45
Avail Cap(c_a), veh/h	2630	1240	334	3268	924	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.58	0.58	0.75	0.75
Uniform Delay (d), s/veh	25.5	4.4	51.6	15.0	39.8	36.6
Incr Delay (d2), s/veh	0.2	0.0	0.4	1.0	3.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	17.7	8.9	3.8	17.8	12.0	12.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.7	4.4	51.9	16.0	43.4	38.0
LnGrp LOS	C	A	D	B	D	D
Approach Vol, veh/h	2520			2641	995	
Approach Delay, s/veh	22.1			18.4	41.6	
Approach LOS	C			B	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		82.0		38.0	16.8	65.2
Change Period (Y+Rc), s		* 5.2		5.9	* 5.2	* 5.2
Max Green Setting (Gmax), s		* 77		32.1	* 11	* 62
Max Q Clear Time (g_c+I1), s		42.4		22.8	7.7	43.8
Green Ext Time (p_c), s		29.4		3.8	0.0	16.2

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Traffic Volume (veh/h)	87	1638	567	410	1819	0	989	0	867	0	0
Future Volume (veh/h)	87	1638	567	410	1819	0	989	0	867	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach		No			No			No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870		
Adj Flow Rate, veh/h	95	1780	616	446	1977	0	1075	1075	942		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2		
Cap, veh/h	74	2332	988	718	2792	0	1309	1309	1307		
Arrive On Green	0.04	0.36	0.36	0.21	0.55	0.00	0.26	0.26	0.26		
Sat Flow, veh/h	1781	6434	1585	3456	5274	0	5023	5023	2790		
Grp Volume(v), veh/h	95	1780	616	446	1977	0	1075	1075	942		
Grp Sat Flow(s),veh/h/ln	1781	1609	1585	1728	1702	0	1674	1674	1395		
Q Serve(g_s), s	5.0	29.3	28.7	14.1	34.4	0.0	24.2	24.2	7.6		
Cycle Q Clear(g_c), s	5.0	29.3	28.7	14.1	34.4	0.0	24.2	24.2	7.6		
Prop In Lane	1.00		1.00	1.00		0.00	1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	74	2332	988	718	2792	0	1309	1309	1307		
V/C Ratio(X)	1.28	0.76	0.62	0.62	0.71	0.00	0.82	0.82	0.72		
Avail Cap(c_a), veh/h	74	2332	988	718	2792	0	1419	1419	1367		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.59	0.59	0.59	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	57.5	33.7	13.9	43.2	20.1	0.0	41.7	41.7	25.6		
Incr Delay (d2), s/veh	173.5	1.4	1.8	1.7	1.5	0.0	3.7	3.7	1.8		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(85%),veh/ln	8.3	14.2	22.5	8.8	17.4	0.0	13.7	13.7	22.4		
Unsig. Movement Delay, s/veh											
LnGrp Delay(d),s/veh	231.0	35.2	15.7	44.9	21.7	0.0	45.5	45.5	27.4		
LnGrp LOS	F	D	B	D	C	A	D	D	C		
Approach Vol, veh/h		2491			2423		2017	2017			
Approach Delay, s/veh		37.8			25.9		37.0	37.0			
Approach LOS		D			C		D	D			

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	9.5	72.3		38.2	31.6	50.2
Change Period (Y+Rc), s	4.5	* 6.7		6.9	* 6.7	* 6.7
Max Green Setting (Gmax), s	5.0	* 56		33.9	* 23	* 44
Max Q Clear Time (g_c+I1), s	7.0	36.4		26.2	16.1	31.3
Green Ext Time (p_c), s	0.0	17.5		5.1	1.0	11.7

Intersection Summary	
HCM 6th Ctrl Delay	33.4
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Beverly Glen Bl & Olympic Bl

04/08/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	1639	133	182	2360	92	185	652	93	297	807	210
Future Volume (veh/h)	213	1639	133	182	2360	92	185	652	93	297	807	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	232	1782	145	198	2565	100	201	709	101	323	877	228
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	1895	154	187	2521	98	209	998	533	267	1037	551
Arrive On Green	0.06	0.39	0.39	0.06	0.39	0.39	0.06	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1781	4814	391	1781	6402	249	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	232	1259	668	198	1932	733	201	709	101	323	877	228
Grp Sat Flow(s),veh/h/ln	1781	1702	1800	1781	1609	1826	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.0	32.0	32.2	5.0	35.4	35.4	5.0	16.1	4.1	6.0	20.9	9.9
Cycle Q Clear(g_c), s	5.0	32.0	32.2	5.0	35.4	35.4	5.0	16.1	4.1	6.0	20.9	9.9
Prop In Lane	1.00		0.22	1.00		0.14	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	1340	709	187	1900	719	209	998	533	267	1037	551
V/C Ratio(X)	1.30	0.94	0.94	1.06	1.02	1.02	0.96	0.71	0.19	1.21	0.85	0.41
Avail Cap(c_a), veh/h	179	1340	709	187	1900	719	209	1106	581	267	1145	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	0.17	0.17	0.17
Uniform Delay (d), s/veh	24.0	26.2	26.3	24.9	27.3	27.3	30.9	29.1	21.2	31.3	30.0	22.4
Incr Delay (d2), s/veh	168.2	13.8	22.4	81.8	24.9	38.7	10.8	0.2	0.0	100.5	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	15.0	18.8	21.8	9.3	21.8	27.6	3.1	7.5	1.9	12.7	10.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	192.3	40.0	48.7	106.7	52.2	66.0	41.7	29.3	21.2	131.7	31.0	22.5
LnGrp LOS	F	D	D	F	F	F	D	C	C	F	C	C
Approach Vol, veh/h		2159			2863			1011			1428	
Approach Delay, s/veh		59.1			59.5			30.9			52.4	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	40.5	9.0	31.5	9.0	40.5	10.0	30.5
Change Period (Y+Rc), s	4.0	* 5.1	4.0	* 5.2	4.0	* 5.1	4.0	* 5.2
Max Green Setting (Gmax), s	5.0	* 33	5.0	* 29	5.0	* 33	6.0	* 28
Max Q Clear Time (g_c+I1), s	7.0	37.4	7.0	22.9	7.0	34.2	8.0	18.1
Green Ext Time (p_c), s	0.0	0.0	0.0	3.4	0.0	0.0	0.0	3.7

Intersection Summary	
HCM 6th Ctrl Delay	54.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	228	1770	2219	188	250	350
Future Volume (veh/h)	228	1770	2219	188	250	350
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	248	1924	2412	204	272	380
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	269	3086	2462	764	960	992
Arrive On Green	0.16	1.00	0.48	0.48	0.28	0.28
Sat Flow, veh/h	3456	5274	5274	1585	3456	2790
Grp Volume(v), veh/h	248	1924	2412	204	272	380
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1585	1728	1395
Q Serve(g_s), s	6.4	0.0	41.7	6.9	5.6	9.1
Cycle Q Clear(g_c), s	6.4	0.0	41.7	6.9	5.6	9.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	269	3086	2462	764	960	992
V/C Ratio(X)	0.92	0.62	0.98	0.27	0.28	0.38
Avail Cap(c_a), veh/h	269	3086	2462	764	960	992
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.93	0.93
Uniform Delay (d), s/veh	37.7	0.0	22.9	13.8	25.5	21.6
Incr Delay (d2), s/veh	35.0	1.0	13.9	0.9	0.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	5.8	0.5	23.0	4.2	3.9	10.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	72.7	1.0	36.8	14.7	26.2	22.7
LnGrp LOS	E	A	D	B	C	C
Approach Vol, veh/h		2172	2616		652	
Approach Delay, s/veh		9.2	35.1		24.1	
Approach LOS		A	D		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		60.2		29.8	11.0	49.2
Change Period (Y+Rc), s		* 5.8		* 4.8	4.0	* 5.8
Max Green Setting (Gmax), s		* 54		* 25	7.0	* 43
Max Q Clear Time (g_c+I1), s		2.0		11.1	8.4	43.7
Green Ext Time (p_c), s		25.9		2.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	543	1128	1822	267	377	441
Future Volume (veh/h)	543	1128	1822	267	377	441
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	590	1226	1980	290	410	479
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	445	3347	1653	239	806	766
Arrive On Green	0.25	0.66	0.37	0.37	0.23	0.23
Sat Flow, veh/h	1781	5274	4675	650	3456	1585
Grp Volume(v), veh/h	590	1226	1488	782	410	479
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1753	1728	1585
Q Serve(g_s), s	22.5	9.8	33.0	33.0	9.3	20.1
Cycle Q Clear(g_c), s	22.5	9.8	33.0	33.0	9.3	20.1
Prop In Lane	1.00			0.37	1.00	1.00
Lane Grp Cap(c), veh/h	445	3347	1248	643	806	766
V/C Ratio(X)	1.32	0.37	1.19	1.22	0.51	0.63
Avail Cap(c_a), veh/h	445	3347	1248	643	806	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.47	0.47	0.44	0.44
Uniform Delay (d), s/veh	33.7	7.0	28.5	28.5	30.0	17.2
Incr Delay (d2), s/veh	161.1	0.3	90.6	104.1	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	40.4	5.0	36.2	40.6	5.2	21.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	194.9	7.3	119.1	132.6	30.2	17.9
LnGrp LOS	F	A	F	F	C	B
Approach Vol, veh/h		1816	2270		889	
Approach Delay, s/veh		68.3	123.7		23.6	
Approach LOS		E	F		C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	26.0	38.0		26.0		64.0
Change Period (Y+Rc), s	3.5	* 5		* 5		* 5
Max Green Setting (Gmax), s	22.5	* 33		* 21		* 59
Max Q Clear Time (g_c+I1), s	24.5	35.0		22.1		11.8
Green Ext Time (p_c), s	0.0	0.0		0.0		12.2

Intersection Summary	
HCM 6th Ctrl Delay	85.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1425	56	57	2043	68	10	7	25	42	4	74
Future Volume (veh/h)	26	1425	56	57	2043	68	10	7	25	42	4	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	1549	61	62	2221	74	11	8	27	46	4	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	169	2789	110	192	2808	93	147	120	309	211	40	314
Arrive On Green	0.55	0.55	0.55	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	161	5040	198	315	5076	169	293	359	927	469	120	942
Grp Volume(v), veh/h	28	1046	564	62	1487	808	46	0	0	130	0	0
Grp Sat Flow(s),veh/h/ln	161	1702	1835	315	1702	1840	1579	0	0	1531	0	0
Q Serve(g_s), s	8.5	17.8	17.8	9.9	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
Cycle Q Clear(g_c), s	8.5	17.8	17.8	27.7	0.0	0.0	1.7	0.0	0.0	5.2	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.09	0.24		0.59	0.35		0.62
Lane Grp Cap(c), veh/h	169	1884	1015	192	1884	1018	576	0	0	564	0	0
V/C Ratio(X)	0.17	0.56	0.56	0.32	0.79	0.79	0.08	0.00	0.00	0.23	0.00	0.00
Avail Cap(c_a), veh/h	169	1884	1015	192	1884	1018	576	0	0	564	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.48	0.48	0.48	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.9	13.0	13.0	5.0	0.0	0.0	20.6	0.0	0.0	21.7	0.0	0.0
Incr Delay (d2), s/veh	1.9	1.1	2.0	2.1	1.7	3.2	0.3	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	0.7	9.1	10.0	0.9	0.8	1.6	1.2	0.0	0.0	3.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.8	14.0	15.0	7.1	1.7	3.2	20.8	0.0	0.0	21.9	0.0	0.0
LnGrp LOS	B	B	B	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h		1638			2357			46			130	
Approach Delay, s/veh		14.3			2.3			20.8			21.9	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	54.6	35.4	54.6	35.4
Change Period (Y+Rc), s	* 4.8	* 5.4	* 4.8	* 5.4
Max Green Setting (Gmax), s	* 50	* 30	* 50	* 30
Max Q Clear Time (g_c+I1), s	29.7	7.2	19.8	3.7
Green Ext Time (p_c), s	19.0	0.7	23.8	0.2

Intersection Summary	
HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	1227	191	583	1784	32	173	0	458	194	0	325
Future Volume (veh/h)	33	1227	191	583	1784	32	173	0	458	194	0	325
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870
Adj Flow Rate, veh/h	36	1334	208	634	1939	35	188	0	498	211	0	353
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	0	2	2	0	2
Cap, veh/h	59	2251	351	396	3587	65	228	0	0	228	0	0
Arrive On Green	0.01	0.17	0.17	0.22	0.69	0.69	0.13	0.00	0.00	0.13	0.00	0.00
Sat Flow, veh/h	1781	4455	695	1781	5164	93	1781	188		1781	211	
Grp Volume(v), veh/h	36	1019	523	634	1278	696	188	45.6		211	78.3	
Grp Sat Flow(s),veh/h/ln	1781	1702	1745	1781	1702	1854	1781	D		1781	E	
Q Serve(g_s), s	1.8	24.9	24.9	20.0	16.5	16.5	9.3			10.5		
Cycle Q Clear(g_c), s	1.8	24.9	24.9	20.0	16.5	16.5	9.3			10.5		
Prop In Lane	1.00		0.40	1.00		0.05	1.00			1.00		
Lane Grp Cap(c), veh/h	59	1720	882	396	2364	1287	228			228		
V/C Ratio(X)	0.61	0.59	0.59	1.60	0.54	0.54	0.82			0.92		
Avail Cap(c_a), veh/h	99	1720	882	396	2364	1287	445			228		
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	0.79	0.79	0.79	1.00	1.00	1.00	1.00			1.00		
Uniform Delay (d), s/veh	43.9	28.9	28.9	35.0	6.7	6.7	38.2			38.8		
Incr Delay (d2), s/veh	7.9	1.2	2.3	282.3	0.9	1.6	7.3			39.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(85%),veh/ln	1.7	14.7	15.3	56.2	7.5	8.4	6.6			9.8		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	30.1	31.3	317.3	7.6	8.4	45.6			78.3		
LnGrp LOS	D	C	C	F	A	A	D			E		
Approach Vol, veh/h		1578			2608							
Approach Delay, s/veh		31.0			83.1							
Approach LOS		C			F							

Timer - Assigned Phs	1	2	3		5	6	7
Phs Duration (G+Y+Rc), s	7.0	67.5	15.5		24.0	50.5	15.5
Change Period (Y+Rc), s	4.0	* 5	4.0		4.0	* 5	4.0
Max Green Setting (Gmax), s	5.0	* 39	22.5		20.0	* 24	7.0
Max Q Clear Time (g_c+I1), s	3.8	18.5	11.3		22.0	26.9	12.5
Green Ext Time (p_c), s	0.0	14.1	0.4		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	63.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	2431	16	8	2501	7	8	0	8	11	0	75
Future Vol, veh/h	73	2431	16	8	2501	7	8	0	8	11	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	49	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	2642	17	9	2718	8	9	0	9	12	0	82

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2726	0	0	2659	0	0	3914	5553	1330	3955	5557	1363
Stage 1	-	-	-	-	-	-	2809	2809	-	2740	2740	-
Stage 2	-	-	-	-	-	-	1105	2744	-	1215	2817	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	~ 53	-	-	57	-	-	~ 4	0	124	~ 3	0	118
Stage 1	-	-	-	-	-	-	10	39	-	~ 11	42	-
Stage 2	-	-	-	-	-	-	202	42	-	172	39	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	~ 53	-	-	57	-	-	-	0	124	-	0	118
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	10	0	-	~ 11	35	-
Stage 2	-	-	-	-	-	-	53	35	-	-	0	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.3	0.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	~ 53	-	-	57	-	-	-
HCM Lane V/C Ratio	-	1.497	-	-	0.153	-	-	-
HCM Control Delay (s)	-	$ 426.2	-	-	79.2	-	-	-
HCM Lane LOS	-	F	-	-	F	-	-	-
HCM 95th %tile Q(veh)	-	7.3	-	-	0.5	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2428	5	29	2442	7	18
Future Vol, veh/h	2428	5	29	2442	7	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	86	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2639	5	32	2654	8	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2644	0	3768	1322
Stage 1	-	-	-	-	2642	-
Stage 2	-	-	-	-	1126	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	58	-	9	126
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	244	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	58	-	~ 4	126
Mov Cap-2 Maneuver	-	-	-	-	18	-
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	109	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	156.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	47	-	-	58	-
HCM Lane V/C Ratio	0.578	-	-	0.543	-
HCM Control Delay (s)	156.8	-	-	124.8	-
HCM Lane LOS	F	-	-	F	-
HCM 95th %tile Q(veh)	2.2	-	-	2.2	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	25	0	0	17
Future Vol, veh/h	0	0	25	0	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	27	0	0	18

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	45	27	0	0	27	0
Stage 1	27	-	-	-	-	-
Stage 2	18	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	965	1048	-	-	1587	-
Stage 1	996	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	965	1048	-	-	1587	-
Mov Cap-2 Maneuver	965	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	1005	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1587	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Beverly Glen Bl & Santa Monica Bl

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	2075	0	188	1369	218	132	712	437	678	636	137
Future Volume (veh/h)	125	2075	0	188	1369	218	132	712	437	678	636	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	2255	0	204	1488	237	143	774	475	737	691	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	1745	0	144	1745	753	198	1128	503	461	1399	624
Arrive On Green	0.04	0.34	0.00	0.08	0.68	0.68	0.06	0.32	0.32	0.13	0.39	0.39
Sat Flow, veh/h	3456	5274	0	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	136	2255	0	204	1488	237	143	774	475	737	691	149
Grp Sat Flow(s),veh/h/ln	1728	1702	0	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.7	41.0	0.0	5.0	26.5	6.5	4.9	22.8	35.0	16.0	17.6	7.6
Cycle Q Clear(g_c), s	4.7	41.0	0.0	5.0	26.5	6.5	4.9	22.8	35.0	16.0	17.6	7.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	1745	0	144	1745	753	198	1128	503	461	1399	624
V/C Ratio(X)	0.94	1.29	0.00	1.42	0.85	0.31	0.72	0.69	0.94	1.60	0.49	0.24
Avail Cap(c_a), veh/h	144	1745	0	144	1745	753	259	1128	503	461	1399	624
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.90	0.90	0.90	0.11	0.11	0.11	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.4	39.5	0.0	55.0	16.7	8.8	55.6	35.7	39.9	52.0	27.4	24.4
Incr Delay (d2), s/veh	57.7	136.1	0.0	220.1	5.0	1.0	0.5	0.4	5.4	279.8	1.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	5.1	52.6	0.0	9.8	9.0	3.4	2.6	11.0	15.5	35.4	10.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	115.1	175.6	0.0	275.1	21.7	9.8	56.1	36.1	45.3	331.8	28.6	25.3
LnGrp LOS	F	F	A	F	C	A	E	D	D	F	C	C
Approach Vol, veh/h		2391			1929			1392			1577	
Approach Delay, s/veh		172.1			47.0			41.3			170.0	
Approach LOS		F			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	46.5	10.9	53.6	9.0	46.5	20.0	44.5
Change Period (Y+Rc), s	4.0	* 5.5	4.0	6.4	4.0	* 5.5	4.0	6.4
Max Green Setting (Gmax), s	5.0	* 41	9.0	45.1	5.0	* 41	16.0	38.1
Max Q Clear Time (g_c+I1), s	6.7	28.5	6.9	19.6	7.0	43.0	18.0	37.0
Green Ext Time (p_c), s	0.0	11.0	0.0	9.7	0.0	0.0	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	113.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2923	416	162	1587	170	204
Future Volume (veh/h)	2923	416	162	1587	170	204
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3177	452	176	1725	185	222
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	3694	1280	230	4204	291	235
Arrive On Green	0.72	0.72	0.07	0.82	0.08	0.08
Sat Flow, veh/h	5274	1585	3456	5274	3456	2790
Grp Volume(v), veh/h	3177	452	176	1725	185	222
Grp Sat Flow(s),veh/h/ln	1702	1585	1728	1702	1728	1395
Q Serve(g_s), s	54.7	9.2	6.0	10.8	6.2	9.5
Cycle Q Clear(g_c), s	54.7	9.2	6.0	10.8	6.2	9.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3694	1280	230	4204	291	235
V/C Ratio(X)	0.86	0.35	0.77	0.41	0.64	0.95
Avail Cap(c_a), veh/h	3694	1280	230	4204	291	235
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.88	0.88	0.32	0.32
Uniform Delay (d), s/veh	12.1	3.1	55.1	2.8	53.2	54.7
Incr Delay (d2), s/veh	0.2	0.0	11.4	0.3	3.4	22.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	19.1	4.6	4.7	4.3	3.8	9.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.4	3.1	66.5	3.1	56.6	77.0
LnGrp LOS	B	A	E	A	E	E
Approach Vol, veh/h	3629			1901	407	
Approach Delay, s/veh	11.2			9.0	67.7	
Approach LOS	B			A	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		104.0		16.0	12.0	92.0
Change Period (Y+Rc), s		* 5.2		5.9	4.0	* 5.2
Max Green Setting (Gmax), s		* 99		10.1	8.0	* 87
Max Q Clear Time (g_c+I1), s		12.8		11.5	8.0	56.7
Green Ext Time (p_c), s		31.0		0.0	0.0	29.7

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Traffic Volume (veh/h)	26	2132	953	817	1382	0	333	0	493	0	0
Future Volume (veh/h)	26	2132	953	817	1382	0	333	0	493	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach		No			No			No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870		
Adj Flow Rate, veh/h	28	2317	1036	888	1502	0	362	362	536		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2		
Cap, veh/h	45	2295	749	1239	3617	0	581	581	1323		
Arrive On Green	0.03	0.36	0.36	0.36	0.71	0.00	0.12	0.12	0.12		
Sat Flow, veh/h	1781	6434	1585	3456	5274	0	5023	5023	2790		
Grp Volume(v), veh/h	28	2317	1036	888	1502	0	362	362	536		
Grp Sat Flow(s),veh/h/ln	1781	1609	1585	1728	1702	0	1674	1674	1395		
Q Serve(g_s), s	1.9	42.8	42.8	26.6	14.6	0.0	8.2	8.2	0.0		
Cycle Q Clear(g_c), s	1.9	42.8	42.8	26.6	14.6	0.0	8.2	8.2	0.0		
Prop In Lane	1.00		1.00	1.00		0.00	1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	45	2295	749	1239	3617	0	581	581	1323		
V/C Ratio(X)	0.62	1.01	1.38	0.72	0.42	0.00	0.62	0.62	0.41		
Avail Cap(c_a), veh/h	92	2295	749	1239	3617	0	1235	1235	1686		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.43	0.43	0.43	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	57.9	38.6	28.0	33.2	7.2	0.0	50.6	50.6	20.5		
Incr Delay (d2), s/veh	5.9	14.7	176.5	2.0	0.4	0.0	1.1	1.1	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(85%),veh/ln	1.6	22.0	78.5	14.9	7.3	0.0	5.5	5.5	12.1		
Unsig. Movement Delay, s/veh											
LnGrp Delay(d),s/veh	63.8	53.3	204.5	35.2	7.6	0.0	51.7	51.7	20.7		
LnGrp LOS	E	F	F	D	A	A	D	D	C		
Approach Vol, veh/h		3381			2390		898	898			
Approach Delay, s/veh		99.7			17.9		33.2	33.2			
Approach LOS		F			B		C	C			

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	7.5	91.7		20.8	49.7	49.5
Change Period (Y+Rc), s	4.5	* 6.7		6.9	* 6.7	* 6.7
Max Green Setting (Gmax), s	6.2	* 66		29.5	* 30	* 43
Max Q Clear Time (g_c+I1), s	3.9	16.6		10.2	28.6	44.8
Green Ext Time (p_c), s	0.0	30.9		3.6	0.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	61.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	2417	87	36	1694	96	240	847	232	241	392	313
Future Volume (veh/h)	326	2417	87	36	1694	96	240	847	232	241	392	313
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	354	2627	95	39	1841	104	261	921	252	262	426	340
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	1890	68	179	1794	557	332	1030	547	238	1109	618
Arrive On Green	0.08	0.37	0.37	0.06	0.35	0.35	0.06	0.29	0.29	0.08	0.31	0.31
Sat Flow, veh/h	1781	5060	181	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	354	1760	962	39	1841	104	261	921	252	262	426	340
Grp Sat Flow(s),veh/h/ln	1781	1702	1838	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.0	33.6	33.6	1.2	31.6	4.1	5.0	22.4	11.1	7.0	8.4	15.0
Cycle Q Clear(g_c), s	7.0	33.6	33.6	1.2	31.6	4.1	5.0	22.4	11.1	7.0	8.4	15.0
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	1271	686	179	1794	557	332	1030	547	238	1109	618
V/C Ratio(X)	1.62	1.38	1.40	0.22	1.03	0.19	0.79	0.89	0.46	1.10	0.38	0.55
Avail Cap(c_a), veh/h	219	1271	686	179	1794	557	332	1066	564	238	1145	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	0.62	0.62	0.62
Uniform Delay (d), s/veh	22.7	28.2	28.2	21.7	29.2	20.3	28.4	30.6	22.9	27.6	24.2	21.3
Incr Delay (d2), s/veh	299.0	177.7	189.7	0.6	28.3	0.7	1.2	1.0	0.1	75.4	0.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	29.6	61.7	69.7	0.9	21.6	2.9	3.6	10.4	4.7	9.3	5.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	321.7	205.9	217.9	22.3	57.4	21.0	29.6	31.7	23.0	103.1	24.3	21.9
LnGrp LOS	F	F	F	C	F	C	C	C	C	F	C	C
Approach Vol, veh/h		3076			1984			1434			1028	
Approach Delay, s/veh		223.0			54.8			29.8			43.6	
Approach LOS		F			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	36.7	9.0	33.3	9.0	38.7	11.0	31.3
Change Period (Y+Rc), s	4.0	* 5.1	4.0	* 5.2	4.0	* 5.1	4.0	* 5.2
Max Green Setting (Gmax), s	7.0	* 31	5.0	* 29	5.0	* 33	7.0	* 27
Max Q Clear Time (g_c+I1), s	9.0	33.6	7.0	17.0	3.2	35.6	9.0	24.4
Green Ext Time (p_c), s	0.0	0.0	0.0	3.3	0.0	0.0	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	117.3
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	660	2550	1873	275	86	120
Future Volume (veh/h)	660	2550	1873	275	86	120
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	717	2772	2036	299	93	130
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	653	3086	1895	588	960	1302
Arrive On Green	0.38	1.00	0.37	0.37	0.28	0.28
Sat Flow, veh/h	3456	5274	5274	1585	3456	2790
Grp Volume(v), veh/h	717	2772	2036	299	93	130
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1585	1728	1395
Q Serve(g_s), s	17.0	0.0	33.4	13.2	1.8	2.3
Cycle Q Clear(g_c), s	17.0	0.0	33.4	13.2	1.8	2.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	653	3086	1895	588	960	1302
V/C Ratio(X)	1.10	0.90	1.07	0.51	0.10	0.10
Avail Cap(c_a), veh/h	653	3086	1895	588	960	1302
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.88	0.88
Uniform Delay (d), s/veh	28.0	0.0	28.3	21.9	24.1	13.4
Incr Delay (d2), s/veh	65.2	4.7	44.0	3.1	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	15.2	2.4	26.6	7.6	1.3	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	93.2	4.7	72.3	25.1	24.3	13.6
LnGrp LOS	F	A	F	C	C	B
Approach Vol, veh/h		3489	2335		223	
Approach Delay, s/veh		22.9	66.2		18.0	
Approach LOS		C	E		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		60.2		29.8	21.0	39.2
Change Period (Y+Rc), s		* 5.8		* 4.8	4.0	* 5.8
Max Green Setting (Gmax), s		* 54		* 25	17.0	* 33
Max Q Clear Time (g_c+I1), s		2.0		4.3	19.0	35.4
Green Ext Time (p_c), s		43.0		0.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	717	2185	1063	352	236	219
Future Volume (veh/h)	717	2185	1063	352	236	219
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	779	2375	1155	383	257	238
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	505	3830	1128	367	480	669
Arrive On Green	0.28	0.75	0.29	0.29	0.14	0.14
Sat Flow, veh/h	1781	5274	2729	857	3456	1585
Grp Volume(v), veh/h	779	2375	772	766	257	238
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1716	1728	1585
Q Serve(g_s), s	25.5	19.6	38.5	38.5	6.2	9.2
Cycle Q Clear(g_c), s	25.5	19.6	38.5	38.5	6.2	9.2
Prop In Lane	1.00			0.50	1.00	1.00
Lane Grp Cap(c), veh/h	505	3830	760	734	480	669
V/C Ratio(X)	1.54	0.62	1.01	1.04	0.54	0.36
Avail Cap(c_a), veh/h	505	3830	760	734	806	819
HCM Platoon Ratio	1.00	1.00	0.67	0.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.43	0.43	0.94	0.94
Uniform Delay (d), s/veh	32.3	5.3	32.1	32.1	36.1	17.7
Incr Delay (d2), s/veh	254.3	0.8	25.2	34.2	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	65.5	7.6	25.8	27.5	4.3	12.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	286.6	6.0	57.3	66.3	36.9	18.0
LnGrp LOS	F	A	F	F	D	B
Approach Vol, veh/h		3154	1538		495	
Approach Delay, s/veh		75.3	61.8		27.8	
Approach LOS		E	E		C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	29.0	43.5		17.5		72.5
Change Period (Y+Rc), s	3.5	* 5		* 5		* 5
Max Green Setting (Gmax), s	25.5	* 30		* 21		* 59
Max Q Clear Time (g_c+I1), s	27.5	40.5		11.2		21.6
Green Ext Time (p_c), s	0.0	0.0		1.3		28.1

Intersection Summary	
HCM 6th Ctrl Delay	66.8
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	2228	21	15	1425	83	9	2	11	36	1	97
Future Volume (veh/h)	67	2228	21	15	1425	83	9	2	11	36	1	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	2422	23	16	1549	90	10	2	12	39	1	105
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	2886	27	103	1889	109	246	65	254	163	30	375
Arrive On Green	0.55	0.55	0.55	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	306	5216	49	139	3414	197	568	194	762	338	91	1125
Grp Volume(v), veh/h	73	1579	866	16	803	836	24	0	0	145	0	0
Grp Sat Flow(s),veh/h/ln	306	1702	1861	139	1777	1835	1523	0	0	1554	0	0
Q Serve(g_s), s	12.6	34.8	34.9	9.2	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	12.6	34.8	34.9	44.1	0.0	0.0	0.9	0.0	0.0	5.8	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.11	0.42		0.50	0.27		0.72
Lane Grp Cap(c), veh/h	249	1884	1030	103	983	1015	564	0	0	569	0	0
V/C Ratio(X)	0.29	0.84	0.84	0.16	0.82	0.82	0.04	0.00	0.00	0.25	0.00	0.00
Avail Cap(c_a), veh/h	249	1884	1030	103	983	1015	564	0	0	569	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	0.38	0.38	0.38	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.8	16.7	16.8	15.5	0.0	0.0	20.3	0.0	0.0	21.9	0.0	0.0
Incr Delay (d2), s/veh	2.2	3.5	6.3	1.2	3.0	3.0	0.1	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	1.7	16.4	18.7	0.5	1.4	1.4	0.6	0.0	0.0	3.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.0	20.3	23.1	16.7	3.0	3.0	20.4	0.0	0.0	22.2	0.0	0.0
LnGrp LOS	B	C	C	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		2518			1655			24			145	
Approach Delay, s/veh		21.1			3.1			20.4			22.2	
Approach LOS		C			A			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	54.6	35.4	54.6	35.4
Change Period (Y+Rc), s	* 4.8	* 5.4	* 4.8	* 5.4
Max Green Setting (Gmax), s	* 50	* 30	* 50	* 30
Max Q Clear Time (g_c+I1), s	46.1	7.8	36.9	2.9
Green Ext Time (p_c), s	3.4	0.8	12.6	0.1

Intersection Summary	
HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	318	1783	154	257	1082	354	260	0	1329	34	0	43
Future Volume (veh/h)	318	1783	154	257	1082	354	260	0	1329	34	0	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870
Adj Flow Rate, veh/h	346	1938	167	279	1176	385	283	0	1445	37	0	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	0	2	2	0	2
Cap, veh/h	336	2482	213	277	1845	604	324	0	0	324	0	0
Arrive On Green	0.38	1.00	1.00	0.16	0.48	0.48	0.18	0.00	0.00	0.18	0.00	0.00
Sat Flow, veh/h	1781	4790	410	1781	3805	1245	1781	283		1781	37	
Grp Volume(v), veh/h	346	1374	731	279	1052	509	283	49.2		37	30.9	
Grp Sat Flow(s),veh/h/ln	1781	1702	1796	1781	1702	1646	1781	D		1781	C	
Q Serve(g_s), s	17.0	0.0	0.0	14.0	20.7	20.8	13.9			1.6		
Cycle Q Clear(g_c), s	17.0	0.0	0.0	14.0	20.7	20.8	13.9			1.6		
Prop In Lane	1.00		0.23	1.00		0.76	1.00			1.00		
Lane Grp Cap(c), veh/h	336	1764	931	277	1650	798	324			324		
V/C Ratio(X)	1.03	0.78	0.79	1.01	0.64	0.64	0.87			0.11		
Avail Cap(c_a), veh/h	336	1764	931	277	1650	798	445			324		
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	0.37	0.37	0.37	1.00	1.00	1.00	1.00			1.00		
Uniform Delay (d), s/veh	28.0	0.0	0.0	38.0	17.3	17.3	35.8			30.8		
Incr Delay (d2), s/veh	37.3	1.3	2.5	55.8	1.9	3.9	13.4			0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(85%),veh/ln	10.8	0.6	1.2	13.6	11.0	11.2	9.9			1.2		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.3	1.3	2.5	93.8	19.2	21.2	49.2			30.9		
LnGrp LOS	F	A	A	F	B	C	D			C		
Approach Vol, veh/h		2451			1840							
Approach Delay, s/veh		10.7			31.0							
Approach LOS		B			C							

Timer - Assigned Phs	1	2	3		5	6	7
Phs Duration (G+Y+Rc), s	21.0	48.6	20.4		18.0	51.6	20.4
Change Period (Y+Rc), s	4.0	* 5	4.0		4.0	* 5	4.0
Max Green Setting (Gmax), s	17.0	* 29	22.5		14.0	* 32	5.0
Max Q Clear Time (g_c+I1), s	19.0	22.8	15.9		16.0	2.0	3.6
Green Ext Time (p_c), s	0.0	4.4	0.5		0.0	20.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	16.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	1939	21	25	1935	19	4	1	16	9	0	47
Future Vol, veh/h	55	1939	21	25	1935	19	4	1	16	9	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	49	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	2108	23	27	2103	21	4	1	17	10	0	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2124	0	0	2131	0	0	3135	4418	1066	3132	4419	1062
Stage 1	-	-	-	-	-	-	2240	2240	-	2168	2168	-
Stage 2	-	-	-	-	-	-	895	2178	-	964	2251	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	108	-	-	107	-	-	12	~ 1	187	12	1	189
Stage 1	-	-	-	-	-	-	26	78	-	29	85	-
Stage 2	-	-	-	-	-	-	273	84	-	248	77	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	108	-	-	107	-	-	~ 4	0	187	~ 5	0	189
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 4	0	-	~ 5	0	-
Stage 1	-	-	-	-	-	-	12	35	-	13	64	-
Stage 2	-	-	-	-	-	-	149	63	-	97	34	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2	0.6	$ 608.5	$ 884.2
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	18	108	-	-	107	-	-	27
HCM Lane V/C Ratio	1.268	0.554	-	-	0.254	-	-	2.254
HCM Control Delay (s)	$ 608.5	73.5	-	-	49.7	-	-	$ 884.2
HCM Lane LOS	F	F	-	-	E	-	-	F
HCM 95th %tile Q(veh)	3.2	2.6	-	-	0.9	-	-	7.3

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1932	4	7	2025	0	0
Future Vol, veh/h	1932	4	7	2025	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	86	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2100	4	8	2201	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2104	0	2998	1052
Stage 1	-	-	-	-	2102	-
Stage 2	-	-	-	-	896	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	111	-	26	191
Stage 1	-	-	-	-	49	-
Stage 2	-	-	-	-	325	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	111	-	24	191
Mov Cap-2 Maneuver	-	-	-	-	43	-
Stage 1	-	-	-	-	49	-
Stage 2	-	-	-	-	302	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	111	-
HCM Lane V/C Ratio	-	-	-	0.069	-
HCM Control Delay (s)	0	-	-	39.8	-
HCM Lane LOS	A	-	-	E	-
HCM 95th %tile Q(veh)	-	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	21	9	1	21
Future Vol, veh/h	0	0	21	9	1	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	23	10	1	23

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	53	28	0	0	33	0
Stage 1	28	-	-	-	-	-
Stage 2	25	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	955	1047	-	-	1579	-
Stage 1	995	-	-	-	-	-
Stage 2	998	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	954	1047	-	-	1579	-
Mov Cap-2 Maneuver	954	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	997	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1579	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s)	-	-	0	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Beverly Glen Bl & Santa Monica Bl

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	1717	0	299	2030	664	119	689	151	385	1019	55
Future Volume (veh/h)	197	1717	0	299	2030	664	119	689	151	385	1019	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	214	1866	0	325	2207	722	129	749	164	418	1108	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	1787	0	230	1915	753	144	1128	503	346	1336	596
Arrive On Green	0.04	0.35	0.00	0.09	0.50	0.50	0.04	0.32	0.32	0.10	0.38	0.38
Sat Flow, veh/h	3456	5274	0	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	214	1866	0	325	2207	722	129	749	164	418	1108	60
Grp Sat Flow(s),veh/h/ln	1728	1702	0	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	5.0	42.0	0.0	8.0	45.0	45.0	4.5	21.9	9.5	12.0	33.9	2.9
Cycle Q Clear(g_c), s	5.0	42.0	0.0	8.0	45.0	45.0	4.5	21.9	9.5	12.0	33.9	2.9
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	1787	0	230	1915	753	144	1128	503	346	1336	596
V/C Ratio(X)	1.49	1.04	0.00	1.41	1.15	0.96	0.90	0.66	0.33	1.21	0.83	0.10
Avail Cap(c_a), veh/h	144	1787	0	230	1915	753	144	1128	503	346	1336	596
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.58	0.58	0.58	0.62	0.62	0.62	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	39.0	0.0	54.7	30.1	25.3	57.2	35.4	31.2	54.0	34.0	24.3
Incr Delay (d2), s/veh	252.0	33.8	0.0	199.3	72.6	16.9	32.0	1.9	1.1	118.3	6.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	11.0	28.6	0.0	13.6	36.9	25.9	3.9	12.3	5.4	15.4	19.6	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	309.5	72.8	0.0	253.9	102.6	42.2	89.3	37.3	32.2	172.3	40.0	24.6
LnGrp LOS	F	F	A	F	F	D	F	D	C	F	D	C
Approach Vol, veh/h		2080			3254			1042			1586	
Approach Delay, s/veh		97.2			104.4			43.0			74.3	
Approach LOS		F			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	50.5	9.0	51.5	12.0	47.5	16.0	44.5
Change Period (Y+Rc), s	4.0	* 5.5	4.0	6.4	4.0	* 5.5	4.0	6.4
Max Green Setting (Gmax), s	5.0	* 45	5.0	45.1	8.0	* 42	12.0	38.1
Max Q Clear Time (g_c+I1), s	7.0	47.0	6.5	35.9	10.0	44.0	14.0	23.9
Green Ext Time (p_c), s	0.0	0.0	0.0	6.8	0.0	0.0	0.0	7.5

Intersection Summary	
HCM 6th Ctrl Delay	88.5
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1928	390	158	2270	608	308
Future Volume (veh/h)	1928	390	158	2270	608	308
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2096	424	172	2467	661	335
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2553	1216	334	3268	924	746
Arrive On Green	0.50	0.50	0.10	0.64	0.27	0.27
Sat Flow, veh/h	5274	1585	3456	5274	3456	2790
Grp Volume(v), veh/h	2096	424	172	2467	661	335
Grp Sat Flow(s),veh/h/ln	1702	1585	1728	1702	1728	1395
Q Serve(g_s), s	41.8	10.2	5.7	40.4	20.8	12.0
Cycle Q Clear(g_c), s	41.8	10.2	5.7	40.4	20.8	12.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2553	1216	334	3268	924	746
V/C Ratio(X)	0.82	0.35	0.51	0.75	0.72	0.45
Avail Cap(c_a), veh/h	2630	1240	334	3268	924	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.51	0.51	0.75	0.75
Uniform Delay (d), s/veh	25.5	4.4	51.5	15.0	39.8	36.6
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.9	3.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	17.7	8.9	3.6	17.6	12.0	12.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.7	4.4	51.8	15.9	43.4	38.1
LnGrp LOS	C	A	D	B	D	D
Approach Vol, veh/h	2520			2639	996	
Approach Delay, s/veh	22.1			18.2	41.6	
Approach LOS	C			B	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		82.0		38.0	16.8	65.2
Change Period (Y+Rc), s		* 5.2		5.9	* 5.2	* 5.2
Max Green Setting (Gmax), s		* 77		32.1	* 11	* 62
Max Q Clear Time (g_c+I1), s		42.4		22.8	7.7	43.8
Green Ext Time (p_c), s		29.4		3.8	0.0	16.2

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Traffic Volume (veh/h)	87	1639	567	410	1817	0	989	0	867	0	0
Future Volume (veh/h)	87	1639	567	410	1817	0	989	0	867	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach		No			No			No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870		
Adj Flow Rate, veh/h	95	1782	616	446	1975	0	1075	1075	942		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2		
Cap, veh/h	119	2450	1012	665	2680	0	1294	1294	1255		
Arrive On Green	0.07	0.38	0.38	0.19	0.52	0.00	0.26	0.26	0.26		
Sat Flow, veh/h	1781	6434	1585	3456	5274	0	5023	5023	2790		
Grp Volume(v), veh/h	95	1782	616	446	1975	0	1075	1075	942		
Grp Sat Flow(s),veh/h/ln	1781	1609	1585	1728	1702	0	1674	1674	1395		
Q Serve(g_s), s	6.3	28.5	27.6	14.4	36.0	0.0	24.3	24.3	10.6		
Cycle Q Clear(g_c), s	6.3	28.5	27.6	14.4	36.0	0.0	24.3	24.3	10.6		
Prop In Lane	1.00		1.00	1.00		0.00	1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	119	2450	1012	665	2680	0	1294	1294	1255		
V/C Ratio(X)	0.80	0.73	0.61	0.67	0.74	0.00	0.83	0.83	0.75		
Avail Cap(c_a), veh/h	171	2450	1012	665	2680	0	1386	1386	1306		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.59	0.59	0.59	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	55.2	31.8	12.8	44.9	22.1	0.0	42.1	42.1	27.4		
Incr Delay (d2), s/veh	9.8	1.1	1.6	2.6	1.9	0.0	4.2	4.2	2.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(85%),veh/ln	4.6	13.8	21.8	9.0	18.3	0.0	13.8	13.8	23.3		
Unsig. Movement Delay, s/veh											
LnGrp Delay(d),s/veh	65.0	33.0	14.5	47.5	23.9	0.0	46.3	46.3	29.8		
LnGrp LOS	E	C	B	D	C	A	D	D	C		
Approach Vol, veh/h		2493			2421		2017	2017			
Approach Delay, s/veh		29.6			28.3		38.6	38.6			
Approach LOS		C			C		D	D			

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	12.5	69.7		37.8	29.8	52.4
Change Period (Y+Rc), s	4.5	* 6.7		6.9	* 6.7	* 6.7
Max Green Setting (Gmax), s	11.5	* 57		33.1	* 23	* 46
Max Q Clear Time (g_c+I1), s	8.3	38.0		26.3	16.4	30.5
Green Ext Time (p_c), s	0.1	17.7		4.7	1.0	14.5

Intersection Summary	
HCM 6th Ctrl Delay	31.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Beverly Glen Bl & Olympic Bl

04/08/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	1636	133	183	2361	93	185	652	90	294	807	210
Future Volume (veh/h)	213	1636	133	183	2361	93	185	652	90	294	807	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	232	1778	145	199	2566	101	201	709	98	320	877	228
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	1895	154	188	2520	99	209	998	533	267	1037	551
Arrive On Green	0.06	0.39	0.39	0.06	0.39	0.39	0.06	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1781	4813	391	1781	6399	251	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	232	1256	667	199	1933	734	201	709	98	320	877	228
Grp Sat Flow(s),veh/h/ln	1781	1702	1800	1781	1609	1825	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.0	31.9	32.1	5.0	35.4	35.4	5.0	16.1	3.9	6.0	20.9	9.9
Cycle Q Clear(g_c), s	5.0	31.9	32.1	5.0	35.4	35.4	5.0	16.1	3.9	6.0	20.9	9.9
Prop In Lane	1.00		0.22	1.00		0.14	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	1340	709	188	1900	719	209	998	533	267	1037	551
V/C Ratio(X)	1.30	0.94	0.94	1.06	1.02	1.02	0.96	0.71	0.18	1.20	0.85	0.41
Avail Cap(c_a), veh/h	179	1340	709	188	1900	719	209	1106	581	267	1145	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	0.17	0.17	0.17
Uniform Delay (d), s/veh	24.0	26.2	26.3	24.9	27.3	27.3	30.9	29.1	21.1	31.3	30.0	22.4
Incr Delay (d2), s/veh	168.2	13.6	22.1	82.8	25.2	39.0	10.8	0.2	0.0	95.3	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	15.0	18.7	21.7	9.4	21.8	27.7	3.1	7.5	1.8	12.2	10.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	192.3	39.8	48.4	107.7	52.4	66.2	41.7	29.3	21.1	126.6	31.0	22.5
LnGrp LOS	F	D	D	F	F	F	D	C	C	F	C	C
Approach Vol, veh/h		2155			2866			1008			1425	
Approach Delay, s/veh		58.8			59.8			31.0			51.1	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	40.5	9.0	31.5	9.0	40.5	10.0	30.5
Change Period (Y+Rc), s	4.0	* 5.1	4.0	* 5.2	4.0	* 5.1	4.0	* 5.2
Max Green Setting (Gmax), s	5.0	* 33	5.0	* 29	5.0	* 33	6.0	* 28
Max Q Clear Time (g_c+I1), s	7.0	37.4	7.0	22.9	7.0	34.1	8.0	18.1
Green Ext Time (p_c), s	0.0	0.0	0.0	3.4	0.0	0.0	0.0	3.7

Intersection Summary	
HCM 6th Ctrl Delay	54.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	229	1772	2215	188	250	348
Future Volume (veh/h)	229	1772	2215	188	250	348
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	249	1926	2408	204	272	378
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	269	3086	2462	764	960	992
Arrive On Green	0.16	1.00	0.48	0.48	0.28	0.28
Sat Flow, veh/h	3456	5274	5274	1585	3456	2790
Grp Volume(v), veh/h	249	1926	2408	204	272	378
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1585	1728	1395
Q Serve(g_s), s	6.4	0.0	41.6	6.9	5.6	9.1
Cycle Q Clear(g_c), s	6.4	0.0	41.6	6.9	5.6	9.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	269	3086	2462	764	960	992
V/C Ratio(X)	0.93	0.62	0.98	0.27	0.28	0.38
Avail Cap(c_a), veh/h	269	3086	2462	764	960	992
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.93	0.93
Uniform Delay (d), s/veh	37.7	0.0	22.8	13.8	25.5	21.6
Incr Delay (d2), s/veh	35.8	1.0	13.7	0.9	0.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	5.8	0.5	22.8	4.2	3.9	10.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	73.6	1.0	36.5	14.7	26.2	22.7
LnGrp LOS	E	A	D	B	C	C
Approach Vol, veh/h		2175	2612		650	
Approach Delay, s/veh		9.3	34.8		24.1	
Approach LOS		A	C		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		60.2		29.8	11.0	49.2
Change Period (Y+Rc), s		* 5.8		* 4.8	4.0	* 5.8
Max Green Setting (Gmax), s		* 54		* 25	7.0	* 43
Max Q Clear Time (g_c+I1), s		2.0		11.1	8.4	43.6
Green Ext Time (p_c), s		26.0		2.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	541	1128	1822	266	377	442
Future Volume (veh/h)	541	1128	1822	266	377	442
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	588	1226	1980	289	410	480
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	445	3347	1653	238	806	766
Arrive On Green	0.25	0.66	0.37	0.37	0.23	0.23
Sat Flow, veh/h	1781	5274	4677	649	3456	1585
Grp Volume(v), veh/h	588	1226	1488	781	410	480
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1754	1728	1585
Q Serve(g_s), s	22.5	9.8	33.0	33.0	9.3	20.2
Cycle Q Clear(g_c), s	22.5	9.8	33.0	33.0	9.3	20.2
Prop In Lane	1.00			0.37	1.00	1.00
Lane Grp Cap(c), veh/h	445	3347	1248	643	806	766
V/C Ratio(X)	1.32	0.37	1.19	1.22	0.51	0.63
Avail Cap(c_a), veh/h	445	3347	1248	643	806	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.47	0.47	0.44	0.44
Uniform Delay (d), s/veh	33.7	7.0	28.5	28.5	30.0	17.2
Incr Delay (d2), s/veh	159.3	0.3	90.4	103.8	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	40.0	5.0	36.1	40.5	5.2	21.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	193.0	7.3	118.9	132.3	30.2	17.9
LnGrp LOS	F	A	F	F	C	B
Approach Vol, veh/h		1814	2269		890	
Approach Delay, s/veh		67.5	123.5		23.6	
Approach LOS		E	F		C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	26.0	38.0		26.0		64.0
Change Period (Y+Rc), s	3.5	* 5		* 5		* 5
Max Green Setting (Gmax), s	22.5	* 33		* 21		* 59
Max Q Clear Time (g_c+I1), s	24.5	35.0		22.2		11.8
Green Ext Time (p_c), s	0.0	0.0		0.0		12.2

Intersection Summary	
HCM 6th Ctrl Delay	85.2
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1425	56	57	2042	67	10	7	25	42	4	74
Future Volume (veh/h)	26	1425	56	57	2042	67	10	7	25	42	4	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	1549	61	62	2220	73	11	8	27	46	4	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	169	2789	110	192	2810	92	147	120	309	211	40	314
Arrive On Green	0.55	0.55	0.55	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	161	5040	198	315	5078	166	293	359	927	469	120	942
Grp Volume(v), veh/h	28	1046	564	62	1486	807	46	0	0	130	0	0
Grp Sat Flow(s),veh/h/ln	161	1702	1835	315	1702	1840	1579	0	0	1531	0	0
Q Serve(g_s), s	8.4	17.8	17.8	9.9	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
Cycle Q Clear(g_c), s	8.4	17.8	17.8	27.7	0.0	0.0	1.7	0.0	0.0	5.2	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.09	0.24		0.59	0.35		0.62
Lane Grp Cap(c), veh/h	169	1884	1015	192	1884	1018	576	0	0	564	0	0
V/C Ratio(X)	0.17	0.56	0.56	0.32	0.79	0.79	0.08	0.00	0.00	0.23	0.00	0.00
Avail Cap(c_a), veh/h	169	1884	1015	192	1884	1018	576	0	0	564	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.48	0.48	0.48	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.9	13.0	13.0	5.0	0.0	0.0	20.6	0.0	0.0	21.7	0.0	0.0
Incr Delay (d2), s/veh	1.9	1.1	2.0	2.1	1.7	3.1	0.3	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(85%),veh/ln	0.7	9.1	10.0	0.9	0.8	1.6	1.2	0.0	0.0	3.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.8	14.0	15.0	7.1	1.7	3.1	20.8	0.0	0.0	21.9	0.0	0.0
LnGrp LOS	B	B	B	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h		1638			2355			46			130	
Approach Delay, s/veh		14.3			2.3			20.8			21.9	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	54.6	35.4	54.6	35.4
Change Period (Y+Rc), s	* 4.8	* 5.4	* 4.8	* 5.4
Max Green Setting (Gmax), s	* 50	* 30	* 50	* 30
Max Q Clear Time (g_c+I1), s	29.7	7.2	19.8	3.7
Green Ext Time (p_c), s	19.0	0.7	23.8	0.2

Intersection Summary	
HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	1227	191	583	1783	32	172	0	458	194	0	325
Future Volume (veh/h)	33	1227	191	583	1783	32	172	0	458	194	0	325
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870
Adj Flow Rate, veh/h	36	1334	208	634	1938	35	187	0	498	211	0	353
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	0	2	2	0	2
Cap, veh/h	59	2253	351	396	3590	65	227	0	0	227	0	0
Arrive On Green	0.01	0.17	0.17	0.22	0.70	0.70	0.13	0.00	0.00	0.13	0.00	0.00
Sat Flow, veh/h	1781	4455	695	1781	5164	93	1781	187		1781	211	
Grp Volume(v), veh/h	36	1019	523	634	1277	696	187	45.6		211	79.4	
Grp Sat Flow(s),veh/h/ln	1781	1702	1745	1781	1702	1854	1781	D		1781	E	
Q Serve(g_s), s	1.8	24.9	24.9	20.0	16.5	16.5	9.2			10.6		
Cycle Q Clear(g_c), s	1.8	24.9	24.9	20.0	16.5	16.5	9.2			10.6		
Prop In Lane	1.00		0.40	1.00		0.05	1.00			1.00		
Lane Grp Cap(c), veh/h	59	1722	883	396	2366	1288	227			227		
V/C Ratio(X)	0.61	0.59	0.59	1.60	0.54	0.54	0.82			0.93		
Avail Cap(c_a), veh/h	99	1722	883	396	2366	1288	445			227		
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	0.79	0.79	0.79	1.00	1.00	1.00	1.00			1.00		
Uniform Delay (d), s/veh	43.9	28.9	28.9	35.0	6.7	6.7	38.3			38.9		
Incr Delay (d2), s/veh	7.9	1.2	2.3	282.3	0.9	1.6	7.3			40.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(85%),veh/ln	1.7	14.7	15.3	56.2	7.5	8.4	6.6			9.9		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	30.1	31.2	317.3	7.6	8.3	45.6			79.4		
LnGrp LOS	D	C	C	F	A	A	D			E		
Approach Vol, veh/h		1578			2607							
Approach Delay, s/veh		31.0			83.1							
Approach LOS		C			F							

Timer - Assigned Phs	1	2	3		5	6	7
Phs Duration (G+Y+Rc), s	7.0	67.6	15.5		24.0	50.5	15.5
Change Period (Y+Rc), s	4.0	* 5	4.0		4.0	* 5	4.0
Max Green Setting (Gmax), s	5.0	* 39	22.5		20.0	* 24	7.0
Max Q Clear Time (g_c+I1), s	3.8	18.5	11.2		22.0	26.9	12.6
Green Ext Time (p_c), s	0.0	14.1	0.4		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	63.5
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	2431	6	4	2504	7	8	0	8	11	0	75
Future Vol, veh/h	73	2431	6	4	2504	7	8	0	8	11	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	49	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	2642	7	4	2722	8	9	0	9	12	0	82

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2730	0	0	2649	0	0	3901	5542	1325	3949	5541	1365
Stage 1	-	-	-	-	-	-	2804	2804	-	2734	2734	-
Stage 2	-	-	-	-	-	-	1097	2738	-	1215	2807	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	~ 53	-	-	58	-	-	~ 4	0	125	~ 3	0	118
Stage 1	-	-	-	-	-	-	10	39	-	~ 11	43	-
Stage 2	-	-	-	-	-	-	205	43	-	172	39	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	~ 53	-	-	58	-	-	-	0	125	-	0	118
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	10	0	-	~ 11	40	-
Stage 2	-	-	-	-	-	-	59	40	-	-	0	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.4	0.1		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	~ 53	-	-	58	-	-	-
HCM Lane V/C Ratio	-	1.497	-	-	0.075	-	-	-
HCM Control Delay (s)	-	$ 426.2	-	-	72	-	-	-
HCM Lane LOS	-	F	-	-	F	-	-	-
HCM 95th %tile Q(veh)	-	7.3	-	-	0.2	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2428	5	27	2438	10	22
Future Vol, veh/h	2428	5	27	2438	10	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	86	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2639	5	29	2650	11	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2644	0	3760	1322
Stage 1	-	-	-	-	2642	-
Stage 2	-	-	-	-	1118	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	58	-	~ 10	126
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	247	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	58	-	~ 5	126
Mov Cap-2 Maneuver	-	-	-	-	18	-
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	124	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	216.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	44	-	-	58	-
HCM Lane V/C Ratio	0.791	-	-	0.506	-
HCM Control Delay (s)	216.7	-	-	118.7	-
HCM Lane LOS	F	-	-	F	-
HCM 95th %tile Q(veh)	3.1	-	-	2	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	7	25	0	0	17
Future Vol, veh/h	0	7	25	0	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	27	0	0	18

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	45	27	0	0	27	0
Stage 1	27	-	-	-	-	-
Stage 2	18	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	965	1048	-	-	1587	-
Stage 1	996	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	965	1048	-	-	1587	-
Mov Cap-2 Maneuver	965	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	1005	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1048	1587	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	-	-	8.5	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Appendix H.2

Los Angeles Department of Transportation Assessment Letter

Da FORM GEN. 160A (Rev. 1/82)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

10328 West Bellwood Avenue
DOT Case No. WLA19-107979

Date: April 15, 2021

To: Suzan Jimenez, Administrative Clerk
Department of City Planning

Robert Sanchez (Apr 15, 2021 09:54 PDT)

From: Robert Sanchez, Transportation Engineer
Department of Transportation

Subject: **TRANSPORTATION ASSESSMENT FOR THE PROPOSED ELDERCARE FACILITY PROJECT TO BE LOCATED AT 10328 WEST BELLWOOD AVENUE (ENV-2018-7182-EIR/ ZA-2018-7183-ELD-SPR)**

The Department of Transportation (DOT) has reviewed the transportation assessment prepared by Gibson Transportation Consulting, Inc., dated February 2021 with a subsequent revision dated April 2021, for the proposed senior residential community project located at 10328 West Bellwood Avenue. In compliance with Senate Bill (SB) 743 and the California Environmental Quality Act (CEQA), a vehicle miles traveled analysis is required to identify the project's ability to promote the reduction of green-house gas emissions, access to diverse land uses, and the development of multi-modal networks. The significance of a project's impact in this regard is measured against the VMT thresholds established in DOT's Transportation Assessment Guidelines (TAG), as described below.

The proposed project is for the construction of a 192-unit senior residential development consisting of 71 independent living units, 75 assisted living units, and 46 memory care units as well as 50,462 square-feet of ancillary general common areas and amenities for residents to be located within Council District 5 in West Los Angeles. The project site currently contains 112 existing multifamily residential apartment units on approximately 2.2 acres comprised of nine contiguous lots on the south side of Bellwood Avenue and four contiguous lots on the north side of Bellwood Avenue which will be removed to allow for the new development. The project site includes parcels located generally north-west and east-south of Bellwood Avenue, as well as a portion of Bellwood Avenue that bifurcates the project site. The portion of Bellwood Avenue that currently bifurcates the project site would be vacated and realigned as a private street with through public access maintained from both sides of Bellwood Avenue. The project is to provide a total of 140 vehicle parking spaces within a two-level underground parking garage and 72 bicycle parking spaces (24 short-term and 48 long-term) per LAMC. Vehicular access will be provided via a new two-way driveway on the south side of Bellwood Avenue as illustrated in **Attachment "A"**. The project is expected to be completed by 2023.

Prior to accounting for trip reductions resulting from the application of Transportation Demand Management (TDM) Strategies, a trip generation analysis was conducted to determine if the project would exceed 250 daily vehicle trips screening threshold. Using the City of Los Angeles VMT Calculator tool, which draws upon trip rate estimates published in the Institute of Transportation Engineer (ITE) Trip Generation Manual, 9th Edition as well as applying trip generation adjustments when applicable, based on socioeconomic data and the built environment factors of the project's surroundings, it was determined that the project does not exceed the net 250 daily vehicle trips threshold. A copy of the LA VMT Calculator screening page with the corresponding net daily trip estimation is provided as **Attachment "B"** to this report.

The project's transportation analysis voluntarily included further discussion of the transportation impact thresholds:

- T-1 Conflicting with plans, programs, ordinances, or policies
- T-2.1 Causing substantial vehicle miles traveled
- T-2.2 Substantially inducing additional automobile travel
- T-3 Substantially increasing hazards due to a geometric design feature or incompatible use.

A project's impacts per thresholds T-2.1 is determined by using the VMT calculator and are fully discussed in the transportation analysis. Additionally, the assessment determined that the project would not have a significant transportation impact under any of the above thresholds. DOT concurs with the conclusion of the analysis that the project trip generation does not meet the net daily trip threshold to require a VMT analysis. Therefore, DOT will not require further transportation analysis for this project.

During the preparation of the new CEQA guidelines, the State's Office of Planning and Research stressed that the lead agencies can continue to apply traditional operational analysis requirements to inform land use decisions provided that such analysis were outside of the CEQA process. The authority for requiring non-CEQA transportation analysis and requiring improvements to address potential circulation deficiencies, lies in the City of Los Angeles' Site Plan Review authority as established in Section 16.05 of the Los Angeles Municipal Code (LAMC). Therefore, DOT continues to require and review a project's site access, circulation, and operational plan to determine if any access enhancements, transit amenities, intersection improvements, traffic signal upgrades, neighborhood traffic calming, or other improvements are needed. In accordance with this authority, the project has also voluntarily completed an access and circulation analysis using a "Level of Service" screening methodology that indicates that the trips generated by the development will not likely result in adverse circulation conditions at several locations. DOT has reviewed this analysis and determined that it adequately discloses operational concerns. A copy of the circulation analysis tables that summarizes these potential deficiencies is provided as **Attachment "C"** to this report.

Please note that the proposed site plan is acceptable to DOT; however, this DOT assessment does not constitute approval of the driveway dimensions, final location, and internal circulation scheme. Those require separate review and approval and should be coordinated with DOT's West LA/ Coastal/ San Pedro Development Review section (7166 West Manchester Avenue, Room #11, at (213) 485-1062). The applicant is also advised to contact BOE for any required highway dedication and physical street improvements for the proposed project.

If you have any questions, please contact me or Pedro Ayala at (213) 485-1062 or via email.

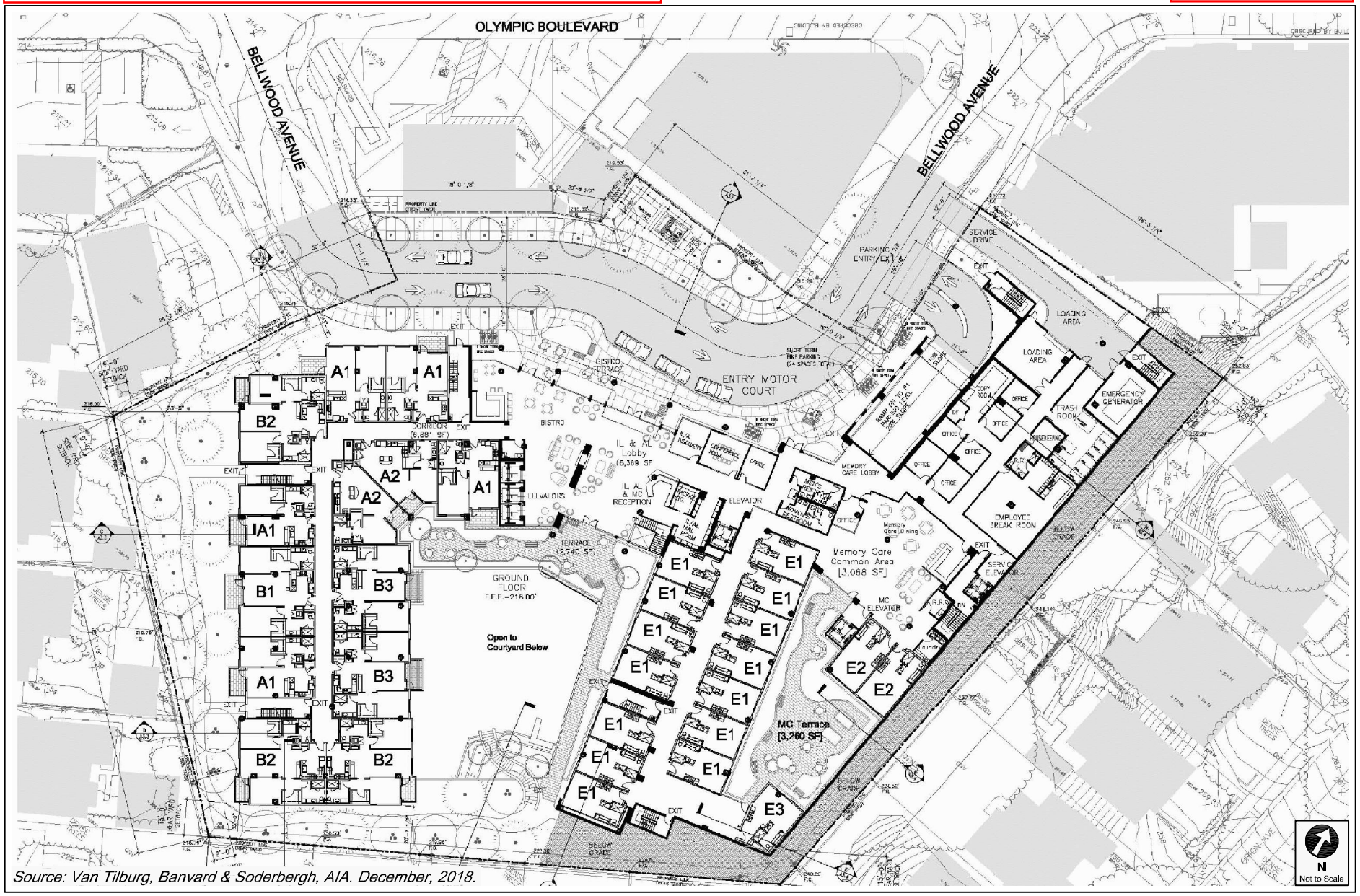
RS:pa

Attachments

c: Cesar Moreno, DCP
Daniel Skolnick, Jay Greenstein, Council District No. 5
Mike Patonai, Oscar Gutierrez, BOE
Rudy Guevara, DOT
Emily Wong, Gibson Transportation Consulting, Inc.

10328 W. Bellwood Ave.: Eldercare facility (WLA19-107979)

Attachment "A"



Source: Van Tilburg, Banvard & Soderbergh, AIA. December, 2018.

PROJECT SITE PLAN

FIGURE 1

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: Senior Residential Living at the Bellwood

Scenario: Project

Address: 10366 W BELLWOOD AVE, 90064

Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

Yes No

Existing Land Use

Land Use Type	Value	Unit
Housing | Multi-Family	112	DU
Housing | Multi-Family	112	

Click here to add a single custom land use type (will be included in the above list)

Proposed Project Land Use

Land Use Type	Value	Unit
Housing | Multi-Family		DU
(custom) Eldercare | Daily	533	Trips
(custom) Eldercare | HBW-Attraction Split	45	Percent
(custom) Eldercare | HBO-Attraction Split	10	Percent
(custom) Eldercare | NHB-Attraction Split	20	Percent
(custom) Eldercare | HBW-Production Split	5	Percent
(custom) Eldercare | HBO-Production Split	10	Percent
(custom) Eldercare | NHB-Production Split	10	Percent
(custom) Eldercare | Daily	231	Residents
(custom) Eldercare | Daily	88	Employees
(custom) Eldercare | Daily	Non-Retail	Retail/Non-Re

Click here to add a single custom land use type (will be included in the above list)

Project Screening Summary

Existing Land Use	Proposed Project
477 Daily Vehicle Trips	402 Daily Vehicle Trips
3,153 Daily VMT	3,192 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips	-75 Net Daily Trips
The net increase in daily VMT ≤ 0	39 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	0.000 ksf

The proposed project is not required to perform VMT analysis.

Measuring the Miles

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

Project Information

Project: Senior Residential Living at the Bellwood

Scenario: Project

Address: 10366 W BELLWOOD AVE, 90064

Proposed Project Land Use Type	Value	Unit
(custom) Eldercare | Daily	533	Trips
(custom) Eldercare | HBW-Attraction Split	45	Percent
(custom) Eldercare | HBO-Attraction Split	10	Percent
(custom) Eldercare | NHB-Attraction Split	20	Percent
(custom) Eldercare | HBW-Production Split	5	Percent
(custom) Eldercare | HBO-Production Split	10	Percent
(custom) Eldercare | NHB-Production Split	10	Percent
(custom) Eldercare | Daily	231	Residents
(custom) Eldercare | Daily	88	Employees
(custom) Eldercare | Daily	Non-Retail	Retail/Non-Re

TDM Strategies

Select each section to show individual strategies

Use ☑ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No

A Parking

Reduce Parking Supply
- 100 — city code parking provision for the project site
- 74 — actual parking provision for the project site
- ☐ Proposed Prj ☐ Mitigation

Unbundle Parking
- monthly parking cost (dollar) for the project site
- ☐ Proposed Prj ☐ Mitigation

Parking Cash-Out
- 50 — percent of employees eligible
- ☐ Proposed Prj ☐ Mitigation

Price Workplace Parking
- 6.00 — daily parking charge (dollar)
- 50 — percent of employees subject to priced parking
- ☐ Proposed Prj ☐ Mitigation

Residential Area Parking Permits
- 200 — cost (dollar) of annual permit
- ☐ Proposed Prj ☐ Mitigation

B Transit

C Education & Encouragement

D Commute Trip Reductions

E Shared Mobility

F Bicycle Infrastructure

G Neighborhood Enhancement

Analysis Results

Proposed Project	With Mitigation
400 Daily Vehicle Trips	400 Daily Vehicle Trips
3,171 Daily VMT	3,171 Daily VMT
N/A Household VMT per Capita	N/A Household VMT per Capita
N/A Work VMT per Employee	N/A Work VMT per Employee

Significant VMT Impact?

Household: N/A Threshold = 7.4 15% Below APC	Household: N/A Threshold = 7.4 15% Below APC
Work: N/A Threshold = 11.1 15% Below APC	Work: N/A Threshold = 11.1 15% Below APC

Measuring the Miles

TABLE 10
EXISTING WITH PROJECT CONDITIONS (YEAR 2019)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Existing		Existing with Project	
			Delay	LOS	Delay	LOS
1.	Beverly Glen Boulevard &	AM	68.1	E	68.1	E
[a]	Santa Monica Boulevard	PM	56.9	E	56.8	E
2.	Century Park West &	AM	14.5	B	13.9	B
[a]	Santa Monica Boulevard	PM	22.3	C	22.1	C
3.	Avenue of the Stars &	AM	28.5	C	35.6	D
[a]	Santa Monica Boulevard	PM	27.2	C	34.0	C
4.	Beverly Glen Boulevard &	AM	94.1	F	94.4	F
[a]	Olympic Boulevard	PM	42.6	D	41.8	D
5.	Century Park West &	AM	31.3	C	31.3	C
[a]	Olympic Boulevard	PM	18.7	B	18.7	B
6.	Beverly Glen Boulevard &	AM	58.4	E	58.5	E
[a]	Pico Boulevard	PM	61.3	E	61.1	E
7.	Kerwood Avenue &	AM	11.6	B	11.5	B
[a]	Pico Boulevard	PM	7.5	A	7.5	A
8.	Motor Avenue &	AM	23.1	C	23.0	C
[a]	Pico Boulevard	PM	28.7	C	28.7	C

Notes
Delay is measured in seconds per vehicle
LOS = Level of service
[a] Signalized intersection analyzed based on the HCM Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

TABLE 11
FUTURE WITH PROJECT CONDITIONS (YEAR 2023)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
1.	Beverly Glen Boulevard &	AM	113.6	F	113.6	F
[a]	Santa Monica Boulevard	PM	88.4	F	88.5	F
2.	Century Park West &	AM	12.7	B	14.4	B
[a]	Santa Monica Boulevard	PM	23.7	C	23.6	C
3.	Avenue of the Stars &	AM	66.2	E	61.4	E
[a]	Santa Monica Boulevard	PM	33.4	C	31.8	C
4.	Beverly Glen Boulevard &	AM	117.1	F	117.3	F
[a]	Olympic Boulevard	PM	54.2	D	54.0	D
5.	Century Park West &	AM	39.6	D	39.4	D
[a]	Olympic Boulevard	PM	23.4	C	23.3	C
6.	Beverly Glen Boulevard &	AM	66.7	E	66.8	E
[a]	Pico Boulevard	PM	85.6	F	85.2	F
7.	Kerwood Avenue &	AM	21.5	C	14.3	B
[a]	Pico Boulevard	PM	7.9	A	7.9	A
8.	Motor Avenue &	AM	33.1	C	21.4	C
[a]	Pico Boulevard	PM	63.4	E	63.5	E

Notes
Delay is measured in seconds per vehicle
LOS = Level of service
[a] Signalized intersection analyzed based on the HCM Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

Appendix H.3

Transportation Analysis for Project Alternatives

MEMORANDUM

TO: Stephanie Eyestone-Jones, Eyestone Environmental

FROM: Sarah M. Drobis, P.E., Emily Wong, P.E., and Janet Ye, EIT

DATE: May 11, 2021

RE: Transportation Analysis of Project Alternatives for the Senior Residential Community at the Bellwood
Los Angeles, California **Ref:** J1661

This memorandum presents the findings of the California Environmental Quality Act (CEQA) analysis of the alternatives (Alternatives) to the proposed development of the Senior Residential Community at the Bellwood project (Project) in the City of Los Angeles, California (City). The analysis of Alternatives is based on the City's *Transportation Assessment Guidelines* (Los Angeles Department of Transportation [LADOT], July 2020) (TAG) addressing the CEQA guidelines and thresholds.

This CEQA analysis of Alternatives was prepared consistent with the methodology, assumptions, and analysis presented in *Transportation Assessment for the Senior Residential Community at the Bellwood Project, Los Angeles, California* (Gibson Transportation Consulting, Inc. [GTC], January 2021) (Transportation Assessment), where applicable.

PROJECT DESCRIPTION

As detailed in the Transportation Assessment, the Project proposes the development of a 192-unit eldercare facility consisting of 71 independent living units, 75 assisted living units, and 46 memory care units, as well as 50,463 square feet (sf) of ancillary common areas and amenities for residents. The existing 112 multi-family residential units on the Project Site would be removed to accommodate the Project. Access to the Project Site would be provided via one full-access driveway on Bellwood Avenue. Additionally, the portion of Bellwood Avenue that currently bifurcates the Project Site would be vacated and realigned as a private street, with access maintained from both sides of Bellwood Avenue. An entry motor court/vehicle turn-out area would be provided along Bellwood Avenue adjacent to the Project Site within the vacated portion of the roadway and would be located adjacent to the lobby area. A separate service driveway, providing access to the loading area, would be located on Bellwood Avenue east of the parking garage. Separate access for pedestrians and bicyclists would be provided via entrances along Bellwood Avenue.

A total of 140 parking spaces would be provided on-site within two subterranean parking levels. The Project would also provide 72 bicycle parking spaces on-site, including both short-term and long-term spaces.

The conceptual site plan for the Project is provided in Figure 1.

ALTERNATIVES

The following three Alternative land use configurations for the Project were identified:

- Alternative 1, No Project Alternative would maintain the existing 112 multi-family residential units currently occupying the site and no new development would occur. This Alternative would not generate additional vehicle trips and, therefore, a CEQA analysis for this Alternative was not conducted.

- Alternative 2, Commercial/Residential Alternative proposes a total of 60 multi-family residential units, 21,257 sf of retail, and 21,257 sf of office. The new residential units under Alternative 2 would not be designated senior housing units in an eldercare facility. Under Alternative 2, the portion of Bellwood Avenue that bifurcates the Project Site would remain a public street in its current alignment. A total of 247 vehicle parking spaces would be provided in one level of subterranean parking under the apartment building and two subterranean levels under the retail/office buildings. Alternative 2 would require less excavation than the Project.

- Alternative 3, Senior Residential Alternative proposes a total of 130 senior residential units. Alternative 3 would not include an eldercare facility. Under Alternative 3, the portion of Bellwood Avenue that bifurcates the Project Site would remain a public street in its current alignment. A total of 260 vehicle parking spaces would be provided in one subterranean parking level under the larger residential building and in one at grade level and one subterranean level for the remaining two residential buildings. Alternative 3 would require less excavation than the Project.

The conceptual site plan for Alternative 2 is provided in Figure 2, and Alternative 3 is depicted in Figure 3.

TRIP GENERATION

Consistent with the Transportation Assessment, trip generation estimates for each Alternative were developed using published rates from *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers, 2017). Table 1 provides a summary of the trip generation estimates for each Alternative, with specific detailed calculations discussed below.

Project

The trip generation estimates for the Project are detailed in Table 2 and demonstrate the Project is anticipated to generate -16 net morning peak hour trips (10 inbound, -26 outbound) and -9 net afternoon peak hour trips (-16 inbound, seven outbound).

Alternative 2

As detailed in Table 3, Alternative 2 would generate a total of 11 net new morning peak hour trips (21 inbound, -10 outbound) and 33 net new afternoon peak hour trips (four inbound, 29 outbound).

Alternative 3

As detailed in Table 4, Alternative 3 would generate -24 net morning peak hour trips (-2 inbound, -22 outbound) and -28 net afternoon peak hour trips (-20 inbound, -8 outbound).

THRESHOLD T-1: CONFLICTING WITH PLANS, PROGRAMS, ORDINANCES, OR POLICIES ANALYSIS

Threshold T-1 assesses whether a project would conflict with an adopted program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities.

Consistent with the Project, each Alternative would be designed to generally conform with the applicable programs, plans, ordinances, or policies identified in Table 2-1.1 of the TAG related to the circulation system, including transit, roadways, bicycles, and pedestrian facilities. None of the Alternatives would preclude the City from implementing future improvements to serve the long-term mobility needs of the City. Therefore, none of the Alternatives would result in a significant impact under Threshold T-1.

Further, consistent with the Project, each Alternative together with the Related Projects would not result in a cumulative impact that would preclude the City from serving the transportation needs as defined by the City's adopted programs, plans, ordinances, or policies.

THRESHOLD T-2.1: CAUSING SUBSTANTIAL VEHICLE MILES TRAVELED (VMT) ANALYSIS

City of Los Angeles VMT Calculator Version 1.3 (LADOT, July 2020) (VMT Calculator) estimates project-specific daily household VMT per capita and daily work VMT per employee for developments within City limits. The VMT Calculator was used to evaluate the VMT of each Alternative and compare it to the VMT impact criteria.

The Project is located within the West Los Angeles Area Planning Commission (APC) area; therefore, the household significant impact criteria is 7.4 household VMT per capita and the work significant impact criteria is 11.1 work VMT per employee. The Project Site is located within a Compact Infill (Zone 3) Travel Behavior Zone; thus, the maximum allowable VMT reduction in the VMT Calculator for the Project is 40%.

VMT Calculator Assumptions

The VMT Calculator was set up with each Alternative's land use program and respective densities as the primary input. The VMT Calculator does not include eldercare facility as a land use option; therefore, the Project VMT evaluation presented in the Transportation Assessment utilized a custom land use input developed for the eldercare facility. Similarly, senior housing is not included as a residential land use option in the VMT Calculator; therefore, a custom land use input was developed for Alternative 3 based on the gross daily trip estimates using published rates for "Senior Housing-Attached" from *Trip Generation Manual, 10th Edition.*

Consistent with the Project, each Alternative would provide short-term and long-term bicycle parking to help reduce the number of single occupancy vehicle trips to the Project Site and was, therefore, considered in the VMT evaluation.

The VMT analysis results based on the VMT Calculator are summarized in Table 1.

Project

Project VMT. As shown in Table 1, accounting for removal of the existing uses, the Project would generate a net reduction of 75 daily trips. Therefore, a "no impact" determination can be made for the Project, and no mitigation measures would be required.

Detailed output from the VMT Calculator is provided in Appendix D of the Transportation Assessment.

Alternative 2

Alternative 2 VMT. As shown in Table 5, the VMT Calculator estimates that Alternative 2 would generate 647 daily household VMT and 1,163 daily work VMT. Alternative 2 would generate an average household VMT per capita of 4.8 and work VMT per employee of 9.1, which would not exceed the significant impact criteria for the West Los Angeles APC. Similar to the Project, impacts related to Alternative 2 would be less than significant and mitigation measures would not be required. While impacts would be less than significant, it should be noted that Alternative 2 would generate more daily vehicle trips and daily VMT than the Project.

Detailed output from the VMT Calculator is provided in Attachment A.

Alternative 3

Alternative 3 VMT. As shown in Table 1, the VMT Calculator estimates that Alternative 3 would generate a net reduction of 134 daily trips. Therefore, similar to the Project, Alternative 3 would not meet the 250 daily trip screening criteria for further VMT analysis as identified in the TAG. Thus, a "no impact" determination could be made for Alternative 3, and no mitigation measures would be required. While impacts would be less than significant, it should be noted that Alternative 3 would generate fewer daily vehicle trips and daily VMT than the Project.

Detailed output from the VMT Calculator is provided in Attachment B.

Cumulative VMT Analysis

Consistent with the Project, the Alternatives would not result in a significant and unavoidable household and/or work VMT impact, as detailed above. The Alternatives would also be designed to further reduce single occupancy trips to the Project Site through design features to encourage a variety of transportation options and would be consistent with *The 2016-2040 Regional Transportation Plan / Sustainable Communities Strategy* (Southern California Association of Governments, April 2016) and *Connect SoCal – The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy* (Southern California Association of Governments, Adopted September 2020) (RTP/SCS) goal of maximizing mobility and accessibility in the region.

Thus, each Alternative would also contribute to the productivity and use of the regional transportation system by providing employment near transit and encourage active transportation by providing new bicycle parking and active street frontages, consistent with RTP/SCS goals. As such, consistent with the Project, the Alternatives would not result in a cumulative VMT impact.

THRESHOLD T-2.2: SUBSTANTIALLY INDUCING ADDITIONAL AUTOMOBILE TRAVEL ANALYSIS

The intent of Threshold T-2.2 is to assess whether a transportation project would induce substantial VMT by increasing vehicular capacity on the roadway network, such as the addition of through traffic lanes on existing or new highways, including general purpose lanes, high-occupancy vehicle lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges.

Consistent with the Project, none of the Alternatives are transportation projects that would induce automobile travel. Therefore, further evaluation will not be required, and none of the Alternatives would result in a significant impact under Threshold T-2.2.

THRESHOLD T-3: SUBSTANTIALLY INCREASING HAZARDS DUE TO A GEOMETRIC DESIGN FEATURE OR INCOMPATIBLE USE ANALYSIS

Threshold T-3 requires that a project undergo further evaluation if it proposes new driveways or new vehicle access points to the property from the public right-of-way (ROW) or modifications along the public ROW (i.e., street dedications) to determine if the geometric design features would substantially increase safety, operational, or capacity hazards.

Project

Driveway Design Features. The driveways would be designed, placed, and configured in accordance with LADOT's *Manual of Policies and Procedures* (December 2008) to limit vehicle

queues and bicycle/pedestrian-vehicle conflicts. As described above, vehicular access to the Project Site would be provided along Bellwood Avenue from Olympic Boulevard. The portion of Bellwood Avenue that bifurcates the Project Site would be vacated and realigned as a private street; however, public, and vehicular access would be maintained from Olympic Boulevard. A separate service driveway along Bellwood Avenue would be provided adjacent to the driveway to the subterranean parking garage. The driveways would be placed to provide an adequate pedestrian refuge area between the two driveways. Additionally, a vehicular motor court would be provided adjacent to the entry court at the lobby entrance.

The driveways and vehicular motor court would be placed along the vacated portion of Bellwood Avenue and would be designed and located at a distance from Olympic Boulevard to limit queue spillovers into the public ROW and reduce interruptions to pedestrian flow and safety. Thus, the Project's driveway would not substantially increase vehicle-vehicle conflicts and would not present any geometric design hazards as it relates to traffic movement.

Pedestrian and Bicycle Activity. The Project would widen adjacent sidewalks along Bellwood Avenue on both sides of the street to create a walkable and attractive pedestrian environment. In addition, paved walkways would be provided internal to the Project Site with access to and from Bellwood Avenue.

As detailed in the Transportation Assessment, currently there are no bicycle facilities adjacent to the Project frontage. Based on existing intersection volume data collected in April 2019, it was observed that Olympic Boulevard carries fewer than 13 bicycles during the entire span of the six-hour commuter peak periods (7:00 to 10:00 AM and 3:00 to 6:00 PM), as detailed in Appendix B of the Transportation Assessment. Therefore, given the minimal bicycle traffic, the driveways would not pose an increased safety hazard to bicyclists.

Physical Terrain. The Project's design integrates with the sloping topography of the surrounding area. The driveway design would not restrict sight lines, allowing drivers to safely identify approaching vehicles, pedestrians, and bicycles before committing to turn. Driveways are designed to intersect Bellwood Avenue at right angles to allow pedestrians and bicyclists to observe vehicles within the driveways.

The Project would provide private and public open space, landscaped elements, and street trees for shade along the Project perimeter and within the Project Site to create a walkable and attractive pedestrian environment. Pedestrian sidewalks would be improved to meet City standards and to provide continuous pedestrian connections on Bellwood Avenue to Olympic Boulevard along the Project frontage.

Project Location. The Project Site is not located adjacent to a street identified as part of the High Injury Network. Additionally, the Safe Routes to School map does not identify any infrastructure improvement projects within the Study Area. As previously noted, the portion of Bellwood Avenue that bifurcates the Project Site would be vacated and aligned as a private street. Nevertheless, the Project would improve the vacated portion of Bellwood Avenue to provide 10-foot sidewalks and a 28-foot roadway.

Incompatible Uses. The Project design incorporates and expands on the surrounding areas to provide a more attractive, well-defined, and accessible interaction between the Project and these uses. None of the Project design elements tangential to the adjacent uses are considered

incompatible. There are no unusual or new obstacles that would be considered hazardous to motorized vehicles, non-motorized vehicles, or pedestrians.

Summary. Based on the site plan design, the Project would not present any geometric design hazards related to mobility or pedestrian accessibility.

Alternative 2

As with the Project, under Alternative 2, driveways would be designed, placed, and configured in accordance with LADOT's *Manual of Policies and Procedures* to limit vehicle queues and bicycle/pedestrian-vehicle conflicts. The portion of Bellwood Avenue that bifurcates the Project Site would remain it its current alignment. The driveways would be placed along Bellwood Avenue and would be designed and located at a distance from Olympic Boulevard to limit queue spillovers into the public ROW and reduce interruptions to pedestrian/bicycle flow and safety.

Summary. Consistent with the Project, based on the site plan design, Alternative 2 does not present any geometric design hazards related to mobility or pedestrian accessibility.

Alternative 3

As previously described, under Alternative 3, the portion of Bellwood Avenue that bifurcates the Project Site would remain in its current alignment. The driveways for Alternative 3 would be designed, placed, and configured in accordance with LADOT's *Manual of Policies and Procedures* to limit vehicle queues and bicycle/pedestrian-vehicle conflicts.

The driveways would be placed along Bellwood Avenue and would be designed and located at a distance from Olympic Boulevard to limit queue spillovers into the public ROW and reduce interruptions to pedestrian/bicycle flow and safety.

Summary. Consistent with the Project, based on the site plan design, Alternative 3 does not present any geometric design hazards related to mobility or pedestrian accessibility.

Cumulative Analysis

Consistent with the Project, none of the Related Projects identified in the Transportation Assessment provide access along the same block as any of the Alternatives. Thus, the Alternatives and Related Projects would not result in a cumulative impact under Threshold T-3.

SUMMARY

- Alternative 2 would generate more peak hour trips during both the morning and afternoon peak hours than the Project, while Alternative 3 would generate fewer peak hour trips during both the morning and afternoon peak hours than the Project.

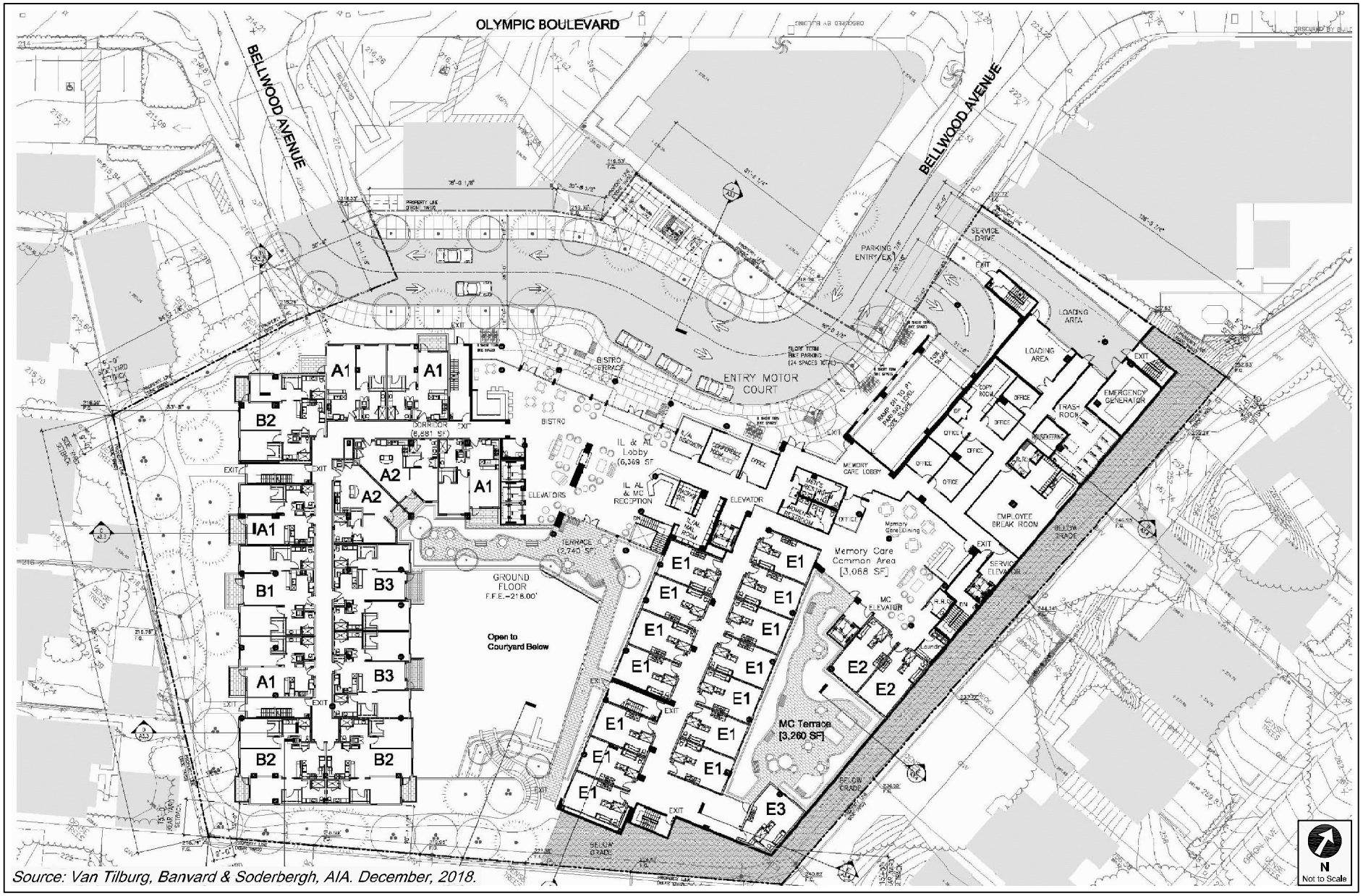
- Consistent with the Project, each Alternative would be designed to generally conform with the applicable programs, plans, ordinances, or policies related to the circulation system, including transit, roadways, bicycles, and pedestrian facilities. None of the Alternatives would preclude the City from implementing future improvements to serve the long-term mobility needs of the City. Consistent with the Project, none of the Alternatives would result in a significant impact under Threshold T-1.

- Consistent with the Project, none of the Alternatives would result in a significant and unavoidable VMT impact under Threshold T-2.1.

- Each Alternative would contribute to the productivity and use of the regional transportation system by and encourage active transportation, consistent with RTP/SCS goals. As such, consistent with the Project, the Alternatives would not result in a cumulative VMT impact.

- Similar to the Project, none of the Alternatives are transportation projects that would induce automobile travel. Therefore, none of the Alternatives would result in a significant impact under Threshold T-2.2.

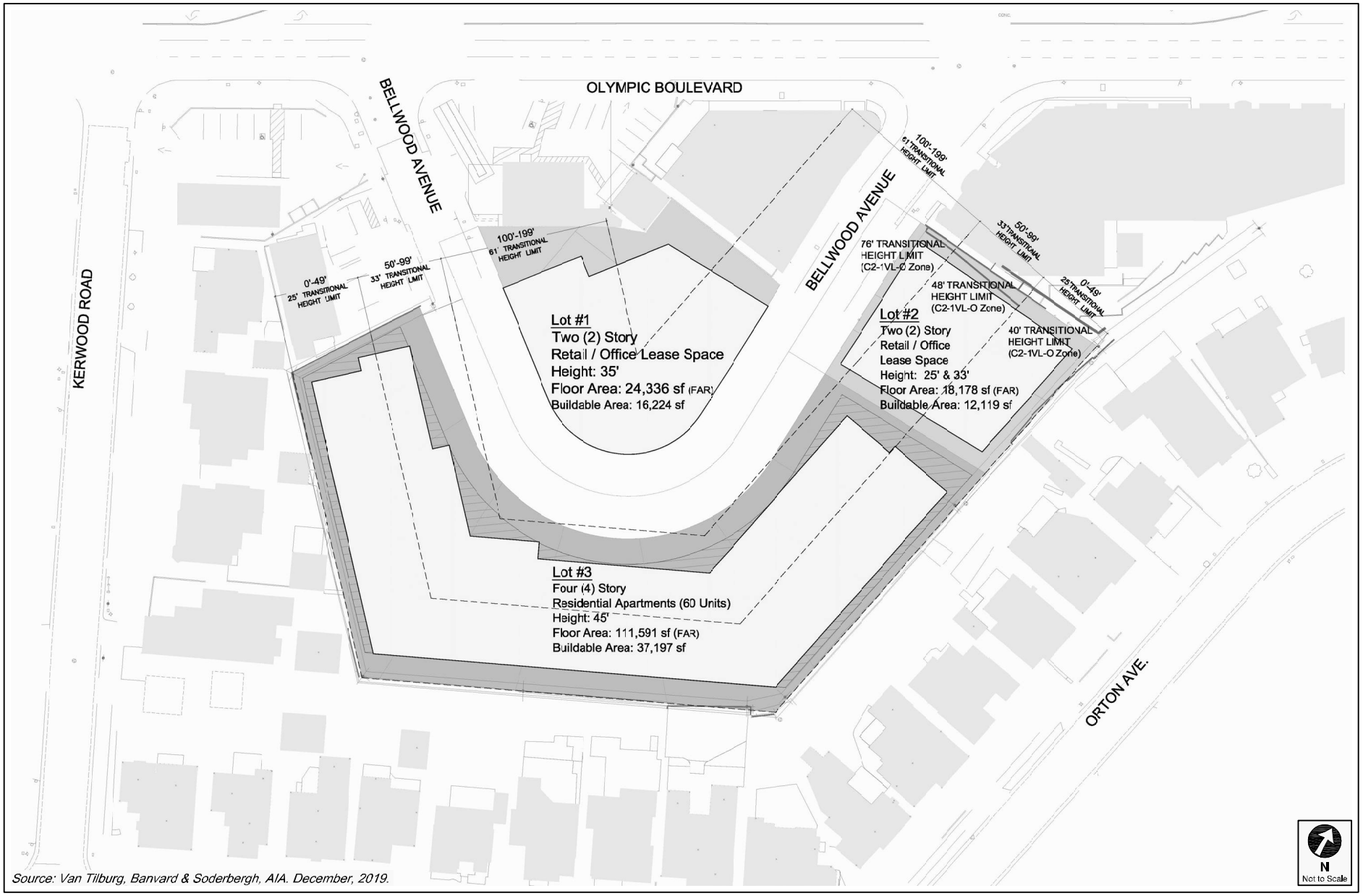
- Consistent with the Project, based on the site plan design for each Alternative, none of the Alternatives present any geometric design hazards related to mobility or pedestrian accessibility. Therefore, none of the Alternatives would result in a significant impact under Threshold T-3.



Source: Van Tilburg, Banvard & Soderbergh, AIA. December, 2018.

PROJECT SITE PLAN

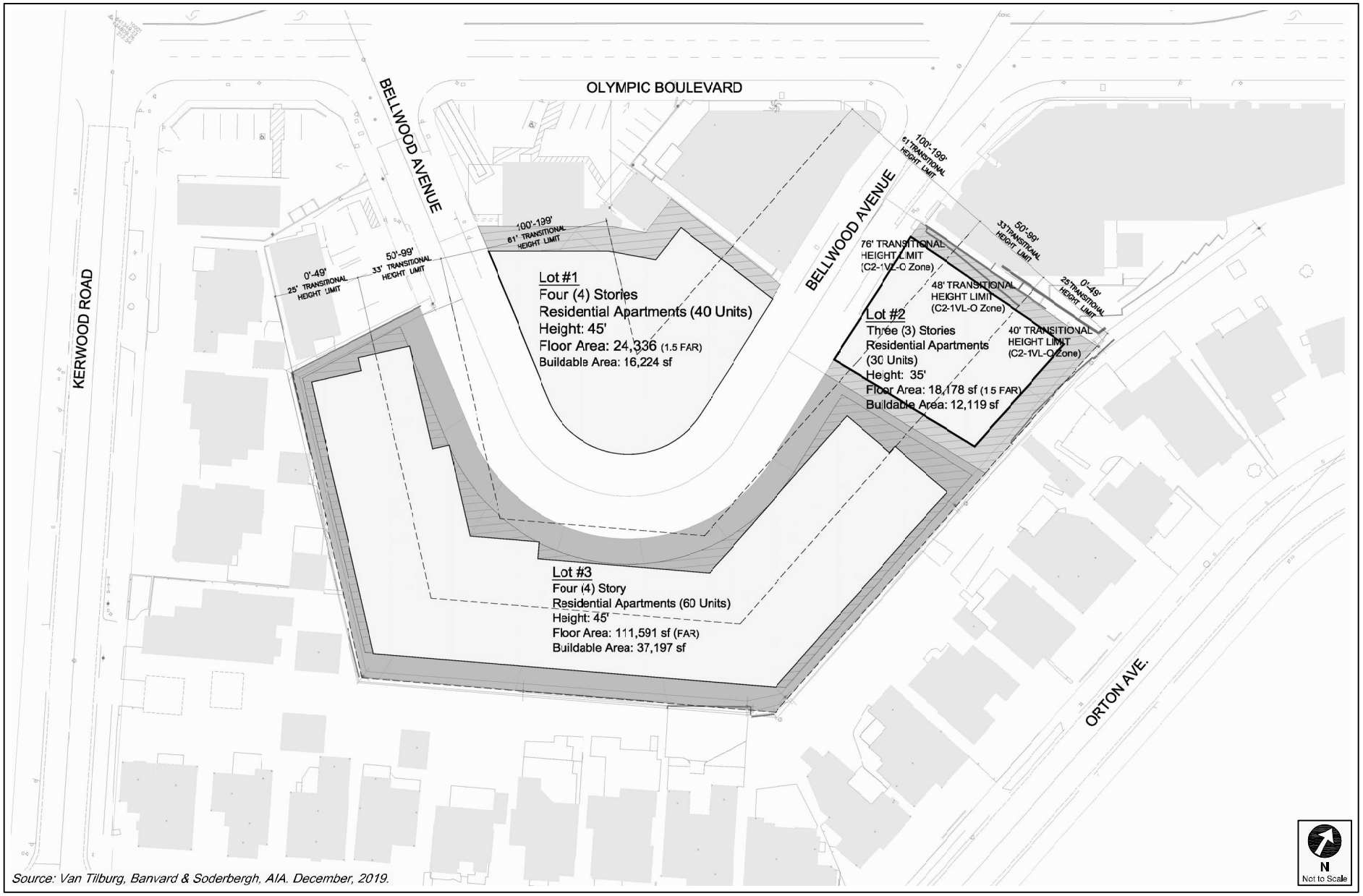
FIGURE 1



Source: Van Tilburg, Banvard & Soderbergh, AIA. December, 2019.

PROJECT SITE PLAN - ALTERNATIVE 2

FIGURE 2



Source: Van Tilburg, Banvard & Soderbergh, AIA. December, 2019.

PROJECT SITE PLAN - ALTERNATIVE 3

FIGURE 3

TABLE 1
ALTERNATIVES SUMMARY

Project Scenario	Trip Generation (Net New Project Trips)						VMT Analysis					
	AM Peak Hour			PM Peak Hour			Net Daily Trips	Net Daily VMT	Household		Work	
	In	Out	Total	In	Out	Total			VMT per Capita	Significant Impact	VMT per Employee	Significant Impact
Project												
Transportation Assessment • 71 Independent Living Units • 75 Assisted Living Beds • 46 Memory Care Beds	10	(26)	(16)	(16)	7	(9)	(75)	39	N/A	**NO**	N/A	**NO**
Alternative 2												
Commercial/Residential Alternative • 60 Residential Units • 21,257 sf retail • 21,257 sf office	21	(10)	11	4	29	33	638	5,631	4.8	**NO**	9.1	**NO**
Alternative 3												
Senior Residential Alternative • 130 Senior Housing Units	(2)	(22)	(24)	(20)	(8)	(28)	(134)	(890)	N/A	**NO**	N/A	**NO**

TABLE 2
PROJECT TRIP GENERATION ESTIMATES
PROJECT

Land Use	ITE Land Use	Size	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Trip Generation Rates [a]								
Multifamily Housing (Low-Rise)	220	per du	23%	77%	0.46	63%	37%	0.56
Congregate Care Facility	253	per du	60%	40%	0.07	53%	47%	0.18
Assisted Living	254	per bed	63%	37%	0.19	38%	62%	0.26
Proposed Project								
Independent Living	253	71 du	3	2	5	7	6	13
Assisted Living [b]	254	99 beds	12	7	19	10	16	26
Memory Care [c]	254	46 beds	6	3	9	5	7	12
Subtotal Proposed Project Trips			**21**	**12**	**33**	**22**	**29**	**51**
Existing Uses to be Removed								
Multifamily Housing (Low-Rise)	220	112 du	12	40	52	40	23	63
Less Walk-In/Transit Reduction - 5% [d]			*(1)*	*(2)*	*(3)*	*(2)*	*(1)*	*(3)*
Subtotal - Existing Residential			**11**	**38**	**49**	**38**	**22**	**60**
TOTAL NET NEW PROJECT TRIPS			**10**	**(26)**	**(16)**	**(16)**	**7**	**(9)**

Notes

1,000 square feet = ksf.

[a] Source: *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017.

[b] The 75 assisted living guestrooms include 51 one-bedroom units and 24 two-bedroom units.

[c] The 46 memory care guestrooms consist only of studio units.

[d] Per LADOT's *Transportation Assessment Guidelines,* the Project Site is located within a 1/4 mile walking distance from a local bus stop, therefore a transit/walk-in reduction is applied to account for transit usage and walking visitor arrivals from the adjacent commercial developments.

TABLE 3
PROJECT TRIP GENERATION ESTIMATES
ALTERNATIVE 2

Land Use	ITE Land Use	Size	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Trip Generation Rates [a]								
Multifamily Housing (Low-Rise)	220	per du	23%	77%	0.46	63%	37%	0.56
General Office Building	710	per ksf	86%	14%	1.16	16%	84%	1.15
Shopping Center	820	per ksf	62%	38%	0.94	48%	52%	3.81
Proposed Project								
Multifamily Housing (Low-Rise)	220	60 du	6	22	28	21	13	34
Less Walk-In/Transit Reduction - 5% [b]			*0*	*(1)*	*(1)*	*(1)*	*(1)*	*(2)*
Office	710	21.257 ksf	22	3	25	4	20	24
Less Walk-In/Transit Reduction - 5% [b]			*(1)*	*0*	*(1)*	*0*	*(1)*	*(1)*
Retail (Shopping Center)	820	21.257 ksf	12	8	20	39	42	81
Less Walk-In/Transit Reduction - 5% [b]			*(1)*	*0*	*(1)*	*(2)*	*(2)*	*(4)*
Pass-by Adjustment - 50% [c]			*(6)*	*(4)*	*(10)*	*(19)*	*(20)*	*(39)*
Subtotal Proposed Project Trips			**32**	**28**	**60**	**42**	**51**	**93**
Existing Uses to be Removed								
Multifamily Housing (Low-Rise)	220	112 du	12	40	52	40	23	63
Less Walk-In/Transit Reduction - 5% [b]			*(1)*	*(2)*	*(3)*	*(2)*	*(1)*	*(3)*
Subtotal - Existing Residential			**11**	**38**	**49**	**38**	**22**	**60**
TOTAL NET NEW PROJECT TRIPS			**21**	**(10)**	**11**	**4**	**29**	**33**

Notes

1,000 square feet = ksf.

[a] Source: *Trip Generation, 10th Edition* , Institute of Transportation Engineers, 2017.

[b] Per LADOT's *Transportation Assessment Guidelines,* the Project Site is located within a 1/4 mile walking distance from a local bus stop, therefore a transit/walk-in reduction is applied to account for transit usage and walking visitor arrivals from the adjacent commercial developments.

[c] Pass-by adjustments account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion.

TABLE 4
PROJECT TRIP GENERATION ESTIMATES
ALTERNATIVE 3

Land Use	ITE Land Use	Size	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Trip Generation Rates [a]								
Multifamily Housing (Low-Rise)	220	per du	23%	77%	0.46	63%	37%	0.56
Senior Adult Housing - Attached	252	per du	35%	65%	0.20	55%	45%	0.26
Proposed Project								
Senior Adult Housing - Attached	252	130 du	9	17	26	19	15	34
Less Walk-In/Transit Reduction - 5% [b]			*0*	*(1)*	*(1)*	*(1)*	*(1)*	*(2)*
Subtotal Proposed Project Trips			**9**	**16**	**25**	**18**	**14**	**32**
Existing Uses to be Removed								
Multifamily Housing (Low-Rise)	220	112 du	12	40	52	40	23	63
Less Walk-In/Transit Reduction - 5% [b]			*(1)*	*(2)*	*(3)*	*(2)*	*(1)*	*(3)*
Subtotal - Existing Residential			**11**	**38**	**49**	**38**	**22**	**60**
TOTAL NET NEW PROJECT TRIPS			**(2)**	**(22)**	**(24)**	**(20)**	**(8)**	**(28)**

Notes

1,000 square feet = ksf.

[a] Source: *Trip Generation, 10th Edition* , Institute of Transportation Engineers, 2017.

[b] Per LADOT's *Transportation Assessment Guidelines,* the Project Site is located within a 1/4 mile walking distance from a local bus stop, therefore a transit/walk-in reduction is applied to account for transit usage and walking visitor arrivals from the adjacent commercial developments.

TABLE 5
VMT ANALYSIS SUMMARY
ALTERNATIVE 2

	Project Information
Address	10366 W Bellwood Avenue
Project Land Uses	**Size**
Multi-Family Housing	60 units
Retail	21,257 sf
General Office	21,257 sf
	Project Analysis [a]
Resident Population	135
Employee Population	128
Area Planning Commission	West Los Angeles
Travel Behavior Zone [b]	Compact Infill
Maximum VMT Reduction [c]	*40%*
	VMT Analysis, prior to Mitigation [f]
Daily Vehicle Trips	1,108
Daily VMT	8,729
Total Household VMT	647
Household VMT per Capita [d]	4.8
Impact Threshold	7.4
Significant Impact	NO
Total Work VMT	1,163
Work VMT per Employee [e]	9.1
Impact Threshold	11.1
Significant Impact	NO

Notes:

[a] Project Analysis is from VMT Calculator output reports provided in Appendix C.
[b] A "Compact Infill" TBZ is characterized in *City of Los Angeles VMT Calculator Documentation* (LADOT and DCP, May 2020) as higher density neighborhoods that include multi-story buildings and well connected streets.
[c] The maximum allowable VMT reduction is based on the Project's designated TBZ.
[d] Household VMT per Capita is based on the "home-based work production" trip types.
[e] Work VMT per Employee is based on the "home-based work attraction" trip types.
[f] The Project design features include:

1. Bicycle parking per LAMC requirements

Attachment A

Alternative 2
VMT Calculator Analysis Worksheets

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

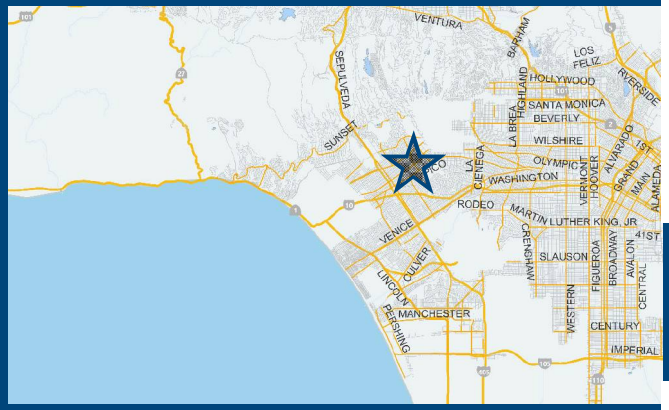
Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: Senior Residential Living at the Bellwood

Scenario: Alternative 2 - Residential/Commercial

Address: 10366 W BELLWOOD AVE, 90064



Existing Land Use

Land Use Type	Value	Unit
Housing | Multi-Family	112	DU
Housing | Multi-Family	112	

Click here to add a single custom land use type (will be included in the above list)

Proposed Project Land Use

Land Use Type	Value	Unit
Housing | Multi-Family	61	DU
Retail | General Retail	21.257	ksf
Office | General Office	21.257	ksf
Housing | Multi-Family	60	

Click here to add a single custom land use type (will be included in the above list)

Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

Yes No

Project Screening Summary

Existing Land Use	Proposed Project
477 Daily Vehicle Trips	1,115 Daily Vehicle Trips
3,153 Daily VMT	8,784 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips	638 Net Daily Trips
The net increase in daily VMT ≤ 0	5,631 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	21.257 ksf

The proposed project is required to perform VMT analysis.

Measuring the Miles

1/5/2021

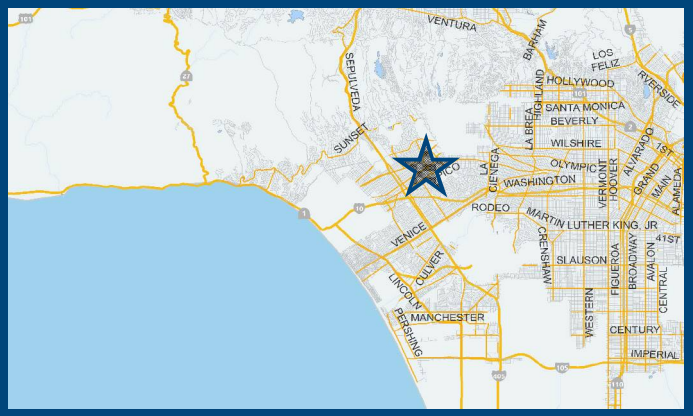
CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

Project Information

Project: Senior Residential Living at the Bellwood

Scenario: Alternative 2 - Residential/Commercial

Address: 10366 W BELLWOOD AVE, 90064



Proposed Project Land Use Type	Value	Unit
Retail | General Retail	21.257	ksf
Office | General Office	21.257	ksf
Housing | Multi-Family	60	

TDM Strategies

Select each section to show individual strategies

Use ☑ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No

A Parking

Reduce Parking Supply
- 100 — city code parking provision for the project site
- 74 — actual parking provision for the project site
- ☐ Proposed Prj ☐ Mitigation

Unbundle Parking
- monthly parking cost (dollar) for the project site
- ☐ Proposed Prj ☐ Mitigation

Parking Cash-Out
- 50 — percent of employees eligible
- ☐ Proposed Prj ☐ Mitigation

Price Workplace Parking
- 6.00 — daily parking charge (dollar)
- 50 — percent of employees subject to priced parking
- ☐ Proposed Prj ☐ Mitigation

Residential Area Parking Permits
- 200 — cost (dollar) of annual permit
- ☐ Proposed Prj ☐ Mitigation

B Transit

C Education & Encouragement

D Commute Trip Reductions

E Shared Mobility

F Bicycle Infrastructure

G Neighborhood Enhancement

Analysis Results

Proposed Project	With Mitigation
1,108 Daily Vehicle Trips	1,108 Daily Vehicle Trips
8,729 Daily VMT	8,729 Daily VMT
4.8 Household VMT per Capita	4.8 Household VMT per Capita
9.1 Work VMT per Employee	9.1 Work VMT per Employee

Significant VMT Impact?

Proposed Project	With Mitigation
Household: No Threshold = 7.4 15% Below APC	Household: No Threshold = 7.4 15% Below APC
Work: No Threshold = 11.1 15% Below APC	Work: No Threshold = 11.1 15% Below APC

Measuring the Miles

1/5/2021

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: January 5, 2021
Project Name: Senior Residential Living at the Bellwooc
Project Scenario: Alternative 2 - Residential/Commercial
Project Address: 10366 W BELLWOOD AVE, 90064

Version 1.3

Project Information			
Land Use Type		**Value**	**Units**
Housing	*Single Family*	*0*	*DU*
	Multi Family	60	DU
	Townhouse	*0*	*DU*
	Hotel	*0*	*Rooms*
	Motel	*0*	*Rooms*
Affordable Housing	*Family*	*0*	*DU*
	Senior	*0*	*DU*
	Special Needs	*0*	*DU*
	Permanent Supportive	*0*	*DU*
Retail	General Retail	21.257	ksf
	Furniture Store	*0.000*	*ksf*
	Pharmacy/Drugstore	*0.000*	*ksf*
	Supermarket	*0.000*	*ksf*
	Bank	*0.000*	*ksf*
	Health Club	*0.000*	*ksf*
	High-Turnover Sit-Down Restaurant	*0.000*	*ksf*
	Fast-Food Restaurant	*0.000*	*ksf*
	Quality Restaurant	*0.000*	*ksf*
	Auto Repair	*0.000*	*ksf*
	Home Improvement	*0.000*	*ksf*
	Free-Standing Discount	*0.000*	*ksf*
	Movie Theater	*0*	*Seats*
Office	General Office	21.257	ksf
	Medical Office	*0.000*	*ksf*
Industrial	*Light Industrial*	*0.000*	*ksf*
	Manufacturing	*0.000*	*ksf*
	Warehousing/Self-Storage	*0.000*	*ksf*
School	*University*	*0*	*Students*
	High School	*0*	*Students*
	Middle School	*0*	*Students*
	Elementary	*0*	*Students*
	Private School (K-12)	*0*	*Students*

Other	*0*	*Trips*

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: January 5, 2021
Project Name: Senior Residential Living at the Bellwooc
Project Scenario: Alternative 2 - Residential/Commercial
Project Address: 10366 W BELLWOOD AVE, 90064

Version 1.3

Analysis Results			
Total Employees: 128			
Total Population: 135			
Proposed Project		***With Mitigation***	
1,108	**Daily Vehicle Trips**	**1,108**	**Daily Vehicle Trips**
8,729	**Daily VMT**	**8,729**	**Daily VMT**
4.8	**Household VMT per Capita**	**4.8**	**Household VMT per Capita**
9.1	**Work VMT per Employee**	**9.1**	**Work VMT per Employee**

Significant VMT Impact?			
APC: West Los Angeles			
Impact Threshold: 15% Below APC Average			
Household = 7.4			
Work = 11.1			
Proposed Project		***With Mitigation***	
VMT Threshold	**Impact**	**VMT Threshold**	**Impact**
Household > 7.4	No	Household > 7.4	No
Work > 11.1	No	Work > 11.1	No

TDM Strategy Inputs

Strategy Type		Description	Proposed Project	Mitigations
Parking	*Reduce parking supply*	*City code parking provision (spaces)*	*0*	*0*
		Actual parking provision (spaces)	*0*	*0*
	Unbundle parking	*Monthly cost for parking ($)*	*$0*	*$0*
	Parking cash-out	*Employees eligible (%)*	*0%*	*0%*
	Price workplace parking	*Daily parking charge ($)*	*$0.00*	*$0.00*
		Employees subject to priced parking (%)	*0%*	*0%*
	Residential area parking permits	*Cost of annual permit ($)*	*$0*	*$0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Transit	*Reduce transit headways*	*Reduction in headways (increase in frequency) (%)*	*0%*	*0%*
		Existing transit mode share (as a percent of total daily trips) (%)	*0%*	*0%*
		Lines within project site improved (<50%, >=50%)	*0*	*0*
	Implement neighborhood shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees and residents eligible (%)	*0%*	*0%*
	Transit subsidies	*Employees and residents eligible (%)*	*0%*	*0%*
		Amount of transit subsidy per passenger (daily equivalent) ($)	*$0.00*	*$0.00*
Education & Encouragement	*Voluntary travel behavior change program*	*Employees and residents participating (%)*	*0%*	*0%*
	Promotions and marketing	*Employees and residents participating (%)*	*0%*	*0%*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Commute Trip Reductions	*Required commute trip reduction program*	*Employees participating (%)*	*0%*	*0%*
	Alternative Work Schedules and Telecommute	*Employees participating (%)*	*0%*	*0%*
		Type of program	*0*	*0*
	Employer sponsored vanpool or shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees eligible (%)	*0%*	*0%*
		Employer size (small, medium, large)	*0*	*0*
	Ride-share program	*Employees eligible (%)*	*0%*	*0%*
Shared Mobility	*Car share*	*Car share project setting (Urban, Suburban, All Other)*	*0*	*0*
	Bike share	*Within 600 feet of existing bike share station - OR- implementing new bike share station (Yes/No)*	*0*	*0*
	School carpool program	*Level of implementation (Low, Medium, High)*	*0*	*0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Bicycle Infrastructure	*Implement/Improve on-street bicycle facility*	*Provide bicycle facility along site (Yes/No)*	*0*	*0*
	Include Bike parking per LAMC	Meets City Bike Parking Code (Yes/No)	Yes	Yes
	Include secure bike parking and showers	*Includes indoor bike parking/lockers, showers, & repair station (Yes/No)*	*0*	*0*
Neighborhood Enhancement	*Traffic calming improvements*	*Streets with traffic calming improvements (%)*	*0%*	*0%*
		Intersections with traffic calming improvements (%)	*0%*	*0%*
	Pedestrian network improvements	*Included (within project and connecting off-site/within project only)*	*0*	*0*

TDM Adjustments by Trip Purpose & Strategy

Place type: Compact Infill

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Parking	Reduce parking supply	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Parking sections 1 - 5
	Unbundle parking	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Parking cash-out	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Price workplace parking	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Residential area parking permits	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
Transit	Reduce transit headways	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Transit sections 1 - 3
	Implement neighborhood shuttle	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Transit subsidies	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
Education & Encouragement	Voluntary travel behavior change program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Education & Encouragement sections 1 - 2
	Promotions and marketing	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
Commute Trip Reductions	Required commute trip reduction program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Commute Trip Reductions sections 1 - 4
	Alternative Work Schedules and Telecommute Program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Employer sponsored vanpool or shuttle	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Ride-share program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
Shared Mobility	Car-share	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Shared Mobility sections 1 - 3
	Bike share	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
	School carpool program	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Compact Infill

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
	Include secure bike parking and showers	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	
Neighborhood Enhancement	Traffic calming improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Neighborhood Enhancement
	Pedestrian network improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	

Final Combined & Maximum TDM Effect

	Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*	
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*
MAX. TDM EFFECT	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*

= Minimum (X%, 1-[(1-A)*(1-B)…])

where X%=

PLACE	*urban*	*75%*
TYPE	compact infill	*40%*
MAX:	*suburban center*	*20%*
	suburban	*15%*

Note: (1-[(1-A)*(1-B)…]) reflects the dampened combined effectiveness of TDM Strategies (e.g., A, B,…). See the TDM Strategy Appendix (*Transportation Assessment Guidelines Attachment G)* for further discussion of dampening.

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: January 5, 2021
Project Name: Senior Residential Living at the Bellwood
Project Scenario: Alternative 2 - Residential/Commercial
Project Address: 10366 W BELLWOOD AVE, 90064

Version 1.3

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	54	-24.1%	41	5.6	302	230
Home Based Other Production	149	-42.3%	86	4.9	730	421
Non-Home Based Other Production	294	-7.5%	272	8.1	2,381	2,203
Home-Based Work Attraction	185	-26.5%	136	8.6	1,591	1,170
Home-Based Other Attraction	579	-38.5%	356	8.4	4,864	2,990
Non-Home Based Other Attraction	242	-7.4%	224	7.9	1,912	1,770

MXD Methodology with TDM Measures

	Proposed Project			*Project with Mitigation Measures*		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-0.6%	41	229	-0.6%	41	229
Home Based Other Production	-0.6%	85	418	-0.6%	85	418
Non-Home Based Other Production	-0.6%	270	2,189	-0.6%	270	2,189
Home-Based Work Attraction	-0.6%	135	1,163	-0.6%	135	1,163
Home-Based Other Attraction	-0.6%	354	2,971	-0.6%	354	2,971
Non-Home Based Other Attraction	-0.6%	223	1,759	-0.6%	223	1,759

MXD VMT Methodology Per Capita & Per Employee

Total Population: 135
Total Employees: 128
APC: West Los Angeles

	Proposed Project	*Project with Mitigation Measures*
Total Home Based Production VMT	**647**	**647**
Total Home Based Work Attraction VMT	**1,163**	**1,163**
Total Home Based VMT Per Capita	**4.8**	**4.8**
Total Work Based VMT Per Employee	**9.1**	**9.1**

Attachment B

Alternative 3
VMT Calculator Analysis Worksheet

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

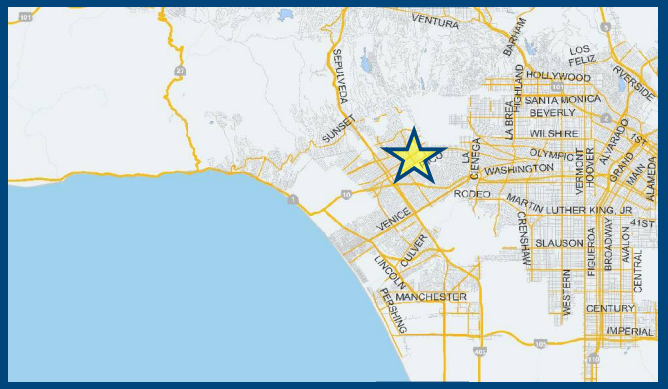
Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: Senior Residential Living at the Bellwood

Scenario: Alternative 3 - Senior Housing

Address: 10366 W BELLWOOD AVE, 90064



Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

○ Yes ○ No

Existing Land Use

Land Use Type	Value	Unit
Housing | Multi-Family		DU
Housing | Multi-Family	112	DU

☐ Click here to add a single custom land use type (will be included in the above list)

Proposed Project Land Use

Land Use Type	Value	Unit
Housing | Multi-Family		DU
(custom) Senior Housing | Retail/Non-Retail [a]	Non-Retai	LU type
(custom) Senior Housing | Residents	158	Person
(custom) Senior Housing | Employees	0	Person
(custom) Senior Housing | Daily	481	Trips
(custom) Senior Housing | HBW-Attraction Spli	0	Percent
(custom) Senior Housing | HBO-Attraction Split	20	Percent
(custom) Senior Housing | NHB-Attraction Split	5	Percent
(custom) Senior Housing | HBW-Production Sp	15	Percent
(custom) Senior Housing | HBO-Production Sp	41	Percent
(custom) Senior Housing | NHB-Production Spl	19	Percent

☑ Click here to add a single custom land use type (will be included in the above list)

Project Screening Summary

Existing Land Use	Proposed
477 Daily Vehicle Trips	343 Daily Vehicle Trips
3,153 Daily VMT	2,263 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips	-134 Net Daily Trips
The net increase in daily VMT ≤ 0	-890 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	0.000 ksf

The proposed project is not required to perform VMT analysis.

Measuring the Miles

[a] Daily trip estimate based on ITE trip rates for "Senior Adult Housing - Attached" land use in *Trip Generation Manual, 10th Edition* (2017).

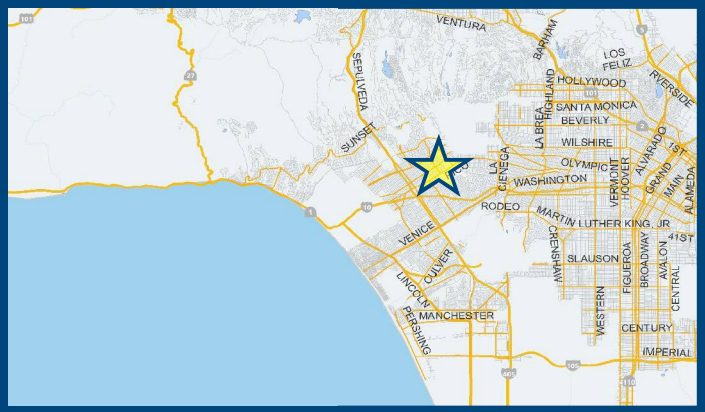
CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

Project Information

Project: Senior Residential Living at the Bellwood

Scenario: Alternative 3 - Senior Housing

Address: 10366 W BELLWOOD AVE, 90064



Proposed Project Land Use Type	Value	Unit
(custom) Senior Housing | Retail/Non-Retail	Non-Retai	LU type
(custom) Senior Housing | Residents	158	Person
(custom) Senior Housing | Employees	0	Person
(custom) Senior Housing | Daily	481	Trips
(custom) Senior Housing | HBW-Attraction Spli	0	Percent
(custom) Senior Housing | HBO-Attraction Split	20	Percent
(custom) Senior Housing | NHB-Attraction Split	5	Percent
(custom) Senior Housing | HBW-Production Sp	15	Percent
(custom) Senior Housing | HBO-Production Sp	41	Percent
(custom) Senior Housing | NHB-Production Spl	19	Percent

TDM Strategies

Select each section to show individual strategies

Use ☑ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No

A Parking

B Transit

C Education & Encouragement

D Commute Trip Reductions

E Shared Mobility

F Bicycle Infrastructure

Implement/Improve On-street Bicycle Facility
☐ Proposed Prj ☐ Mitigation — Select Proposed Prj or Mitigation to include this strategy

Include Bike Parking Per LAMC
☑ Proposed Prj ☐ Mitigation — Select Proposed Prj or Mitigation to include this strategy

Include Secure Bike Parking and Showers
☐ Proposed Prj ☐ Mitigation — Select Proposed Prj or Mitigation to include this strategy

G Neighborhood Enhancement

Analysis Results

Proposed Project	With Mitigation
342 Daily Vehicle Trips	**342** Daily Vehicle Trips
2,249 Daily VMT	**2,249** Daily VMT
N/A Household VMT per Capita	**N/A** Household VMT per Capita
N/A Work VMT per Employee	**N/A** Work VMT per Employee

Significant VMT Impact?

Household: N/A Threshold = 7.4 15% Below APC	**Household: N/A** Threshold = 7.4 15% Below APC
Work: N/A Threshold = 11.1 15% Below APC	**Work: N/A** Threshold = 11.1 15% Below APC

Measuring the Miles

5/10/2021

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: May 10, 2021
Project Name: Senior Residential Living at the Bellwooc
Project Scenario: Alternative 3 - Senior Housing
Project Address: 10366 W BELLWOOD AVE, 90064

Version 1.3

Project Information

Land Use Type		Value	Units
Housing	Single Family	0	DU
	Multi Family	0	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	0	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
Retail	General Retail	0.000	ksf
	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down Restaurant	0.000	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
Office	General Office	0.000	ksf
	Medical Office	0.000	ksf
Industrial	Light Industrial	0.000	ksf
	Manufacturing	0.000	ksf
	Warehousing/Self-Storage	0.000	ksf
School	University	0	Students
	High School	0	Students
	Middle School	0	Students
	Elementary	0	Students
	Private School (K-12)	0	Students
Other	Senior Housing	481	Trips

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: May 10, 2021
Project Name: Senior Residential Living at the Bellwooc
Project Scenario: Alternative 3 - Senior Housing
Project Address: 10366 W BELLWOOD AVE, 90064

Version 1.3

Analysis Results

Total Employees: 0
Total Population: 158

Proposed Project		*With Mitigation*	
342	Daily Vehicle Trips	342	Daily Vehicle Trips
2,249	Daily VMT	2,249	Daily VMT
N/A	Household VMT per Capita	N/A	Household VMT per Capita
N/A	Work VMT per Employee	N/A	Work VMT per Employee

Significant VMT Impact?

APC: West Los Angeles

Impact Threshold: 15% Below APC Average
Household = 7.4
Work = 11.1

Proposed Project		*With Mitigation*	
VMT Threshold	Impact	VMT Threshold	Impact
Household > 7.4	N/A	Household > 7.4	N/A
Work > 11.1	N/A	Work > 11.1	N/A

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: May 10, 2021
Project Name: Senior Residential Living at the Bellwoc
Project Scenario: Alternative 3 - Senior Housing
Project Address: 10366 W BELLWOOD AVE, 90064

Version 1.3

TDM Strategy Inputs

Strategy Type		Description	Proposed Project	Mitigations
Parking	*Reduce parking supply*	*City code parking provision (spaces)*	*0*	*0*
		Actual parking provision (spaces)	*0*	*0*
	Unbundle parking	*Monthly cost for parking ($)*	*$0*	*$0*
	Parking cash-out	*Employees eligible (%)*	*0%*	*0%*
	Price workplace parking	*Daily parking charge ($)*	*$0.00*	*$0.00*
		Employees subject to priced parking (%)	*0%*	*0%*
	Residential area parking permits	*Cost of annual permit ($)*	*$0*	*$0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Transit	*Reduce transit headways*	*Reduction in headways (increase in frequency) (%)*	*0%*	*0%*
		Existing transit mode share (as a percent of total daily trips) (%)	*0%*	*0%*
		Lines within project site improved (<50%, >=50%)	*0*	*0*
	Implement neighborhood shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees and residents eligible (%)	*0%*	*0%*
	Transit subsidies	*Employees and residents eligible (%)*	*0%*	*0%*
		Amount of transit subsidy per passenger (daily equivalent) ($)	*$0.00*	*$0.00*
Education & Encouragement	*Voluntary travel behavior change program*	*Employees and residents participating (%)*	*0%*	*0%*
	Promotions and marketing	*Employees and residents participating (%)*	*0%*	*0%*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Commute Trip Reductions	*Required commute trip reduction program*	*Employees participating (%)*	*0%*	*0%*
	Alternative Work Schedules and Telecommute	*Employees participating (%)*	*0%*	*0%*
		Type of program	*0*	*0*
	Employer sponsored vanpool or shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees eligible (%)	*0%*	*0%*
		Employer size (small, medium, large)	*0*	*0*
	Ride-share program	*Employees eligible (%)*	*0%*	*0%*
Shared Mobility	*Car share*	*Car share project setting (Urban, Suburban, All Other)*	*0*	*0*
	Bike share	*Within 600 feet of existing bike share station - OR- implementing new bike share station (Yes/No)*	*0*	*0*
	School carpool program	*Level of implementation (Low, Medium, High)*	*0*	*0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Bicycle Infrastructure	*Implement/Improve on-street bicycle facility*	*Provide bicycle facility along site (Yes/No)*	*0*	*0*
	Include Bike parking per LAMC	Meets City Bike Parking Code (Yes/No)	Yes	Yes
	Include secure bike parking and showers	*Includes indoor bike parking/lockers, showers, & repair station (Yes/No)*	*0*	*0*
Neighborhood Enhancement	*Traffic calming improvements*	*Streets with traffic calming improvements (%)*	*0%*	*0%*
		Intersections with traffic calming improvements (%)	*0%*	*0%*
	Pedestrian network improvements	*Included (within project and connecting off-site/within project only)*	*0*	*0*

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: May 10, 2021
Project Name: Senior Residential Living at the Bellwood
Project Scenario: Alternative 3 - Senior Housing
Project Address: 10366 W BELLWOOD AVE, 90064

Version 1.3

TDM Adjustments by Trip Purpose & Strategy

Place type: Compact Infill

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Parking	Reduce parking supply	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Parking sections 1 - 5
	Unbundle parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Parking cash-out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Price workplace parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Residential area parking permits	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Transit	Reduce transit headways	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Transit sections 1 - 3
	Implement neighborhood shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Transit subsidies	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Education & Encouragement	Voluntary travel behavior change program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Education & Encouragement sections 1 - 2
	Promotions and marketing	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Commute Trip Reductions	Required commute trip reduction program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Commute Trip Reductions sections 1 - 4
	Alternative Work Schedules and Telecommute Program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Employer sponsored vanpool or shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Ride-share program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Shared Mobility	Car-share	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Shared Mobility sections 1 - 3
	Bike share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	School carpool program	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Compact Infill

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
	Include secure bike parking and showers	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	
Neighborhood Enhancement	Traffic calming improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Neighborhood Enhancement sections 1 - 2
	Pedestrian network improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	

Final Combined & Maximum TDM Effect

	Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*	
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*
MAX. TDM EFFECT	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*

= Minimum (X%, 1-[(1-A)*(1-B)...])

where X%=

PLACE TYPE MAX:	*urban*	*75%*
	compact infill	*40%*
	suburban center	*20%*
	suburban	*15%*

Note: (1-[(1-A)*(1-B)...]) reflects the dampened combined effectiveness of TDM Strategies (e.g., A, B,...). See the TDM Strategy Appendix (*Transportation Assessment Guidelines Attachment G)* for further discussion of dampening.

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: May 10, 2021
Project Name: Senior Residential Living at the Bellwoo
Project Scenario: Alternative 3 - Senior Housing
Project Address: 10366 W BELLWOOD AVE, 90064

Version 1.3

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	72	-18.1%	59	5.6	403	330
Home Based Other Production	197	-39.6%	119	4.9	965	583
Non-Home Based Other Production	91	-6.6%	85	8.1	737	689
Home-Based Work Attraction	0	0.0%	0	8.6	0	0
Home-Based Other Attraction	96	-40.6%	57	8.4	806	479
Non-Home Based Other Attraction	24	-4.2%	23	7.9	190	182

MXD Methodology with TDM Measures

	Proposed Project			*Project with Mitigation Measures*		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-0.6%	59	328	-0.6%	59	328
Home Based Other Production	-0.6%	118	579	-0.6%	118	579
Non-Home Based Other Production	-0.6%	85	685	-0.6%	85	685
Home-Based Work Attraction	-0.6%	0	0	-0.6%	0	0
Home-Based Other Attraction	-0.6%	57	476	-0.6%	57	476
Non-Home Based Other Attraction	-0.6%	23	181	-0.6%	23	181

MXD VMT Methodology Per Capita & Per Employee

Total Population: 158
Total Employees: 0
APC: West Los Angeles

	Proposed Project	*Project with Mitigation Measures*
Total Home Based Production VMT	**907**	**907**
Total Home Based Work Attraction VMT	**0**	**0**
Total Home Based VMT Per Capita	**N/A**	**N/A**
Total Work Based VMT Per Employee	**N/A**	**N/A**

Appendix I

Tribal Cultural Resources

Appendix I.1

Tribal Cultural Resources Report

TRIBAL CULTURAL RESOURCES REPORT FOR THE BELLWOOD AVENUE PROJECT

CITY OF LOS ANGELES, LOS ANGELES COUNTY, CALIFORNIA

PREPARED FOR:

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EXECUTIVE SUMMARY

Eyestone Environmental retained Dudek to conduct a Tribal Cultural Resources (TCRs) study for the Bellwood Avenue Project (proposed Project) for compliance with the California Environmental Quality Act (CEQA). The Project proposes to develop a new eldercare facility for persons 62 years of age and older. The proposed Project Site is located in the West Los Angeles Community Plan Area of the City of Los Angeles, approximately 6-miles east of the Pacific Ocean. The 2.22-acre proposed Project Site is located within a heavily developed area at 10328-10384 and 10341-10381 Bellwood Avenue. The Project falls on public land survey system (PLSS) Township 1 South, Range 15 West, within Section 26 of the *Beverly Hills*, California 7.5-minute United States Geological Survey (USGS) Quadrangle.

The present study documents the results of a California Historical Resources Information Systems (CHRIS) records search conducted at the South Central Coastal Information Center (SCCIC), a search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) and tribal consultation initiated by the City of Los Angeles Department of City Planning (City) pursuant to California Assembly Bill (AB) 52. This report further includes a cultural context and in-depth review of archival, academic, and ethnographic information. No Native American resources were identified within the proposed Project Site or the surrounding area through the SCCIC records (completed August 16, 2019) or through a search of the NAHC SLF (completed August 19, 2019). The proposed Project Site was developed by the 1950s at the latest and has been substantially disturbed as a result.

All NAHC-listed California Native American Tribal representatives that have requested project notification pursuant to AB 52 were sent project notification letters by the City on May 30, 2019. Representatives included: Andrew Salas, Gabrieleno Band of Mission Indians - Kizh Nation; Kimia Fatehi, Fernandeño Tataviam Band of Mission Indians; Robert F. Dorame, Gabrielino Tongva Indians of California Tribal Council; Sam Dunlap, Gabrielino/Tongva Nation; Sadonne Goad, Gabrielino/Tongva Nation; Anthony Morales, Gabrielino/Tongva San Gabriel Band of Mission Indians; Charles Alvarez, Gabrielino-Tongva Tribe; Linda Candelaria, Gabrielino-Tongva Tribe; John Valenzuela, San Fernando Band of Mission Indians; Joseph Ontiveros, Soboba Band of Luiseno Indians; and Michael Mirelez, Torres Martinez Desert Cahuilla Indians.

The City received one response via email for consultation from the Gabrieleno Band of Mission Indians - Kizh Nation (Kizh Nation) requesting consulting party status on June 4, 2019. The City also received a response from the Torres – Martinez Desert Cahuilla deferring to Tribes that are closer to the Project area.

A consultation call between the City and Kizh Nation representatives regarding the proposed Project was held on July 31, 2019. During the call, the Kizh Nation observed that Santa Monica Boulevard was a known trade route and that the Project falls near medicinal natural springs. In a follow-up email on August 5, 2019, the Kizh Nation provided supporting documentation, which included screen shots of excerpts from unspecified literary sources, a pictorial, and historical maps including some explanatory text for the provided maps. No specific location of the identified springs was provided, however, review of available information by Dudek

suggests that the nearest historically documented spring was mapped slightly more than 2.5 miles west of the Project Site. In addition, a review of the historical maps indicate that the nearest mapped tributary is approximately 0.82 miles west of the Project Site. Additionally, the Pasadena and Pacific Railroad are shown outside of the Project Site, approximately 0.16 miles to north, which according to the Kizh Nation, are where trade routes would have existed. While a review of the 1881 map provided by the Kizh Nation does indeed show that the Project Site is on the boundary line between Rancho San Jose de Buenos Ayres and Rancho Rincon de Los Bueyes, the map does not include any reference to the village site of Yangna. However, a review of archival records indicate that the village site mapped nearest to the Project and substantiated through the archaeological record is Cabuepet (or Cahuenga), approximately 6-7 miles to the northwest of the Project Site. Lastly, the Kizh Nation also provided the City with mitigation language recommended for the management of TCRs.

To date, no other responses have been received from the tribal contacts regarding TCRs or other concerns about the proposed Project. Government-to-government consultation initiated by the City, acting in good faith and after a reasonable effort, has not resulted in the identification of a TCR within or near the proposed Project Site. Having received no further information, the City issued a letter closing consultation coinciding with publication of the Draft EIR.

Given that no TCR has been identified that could be affected, and based on the tribal consultation, no TCR was identified that could be impacted by the proposed Project, impacts to TCRs would be less than significant and no mitigation measures are required. Nonetheless, the City generally applies a standard condition of approval to projects that disturb soil to address any unanticipated discovery of TCRs during grading activities.

1 INTRODUCTION

Eyestone Environmental retained Dudek to complete a Tribal Cultural Resources (TCR) study for the proposed Bellwood Avenue Project (proposed Project) for compliance with the California Environmental Quality Act (CEQA). The present study documents the negative results of a California Historical Resources Information System (CHRIS) records search completed at the South Central Coastal Information Center (SCCIC), a search of the Native American Heritage Commission's (NAHC) Sacred Lands File (SLF), and tribal consultation initiated by the City of Los Angeles Department of City Planning (City) pursuant to California Assembly Bill (AB) 52. This report further includes a cultural context and in-depth review of archival, academic, and ethnographic information.

1.1 Project Personnel

Adam Giacinto, MA, RPA, acted as principal archaeological and ethnographic investigator, drafted the present report, and provided management recommendations for TCRs. Linda Kry, BA, RA, contributed to this report and provided management oversight. Adriane Gusick, BA, completed the SCCIC records search, historical research, and contributed to this report. Makayla Murillo, BA, contributed to this report. Micah Hale, PhD, RPA reviewed recommendations for regulatory compliance.

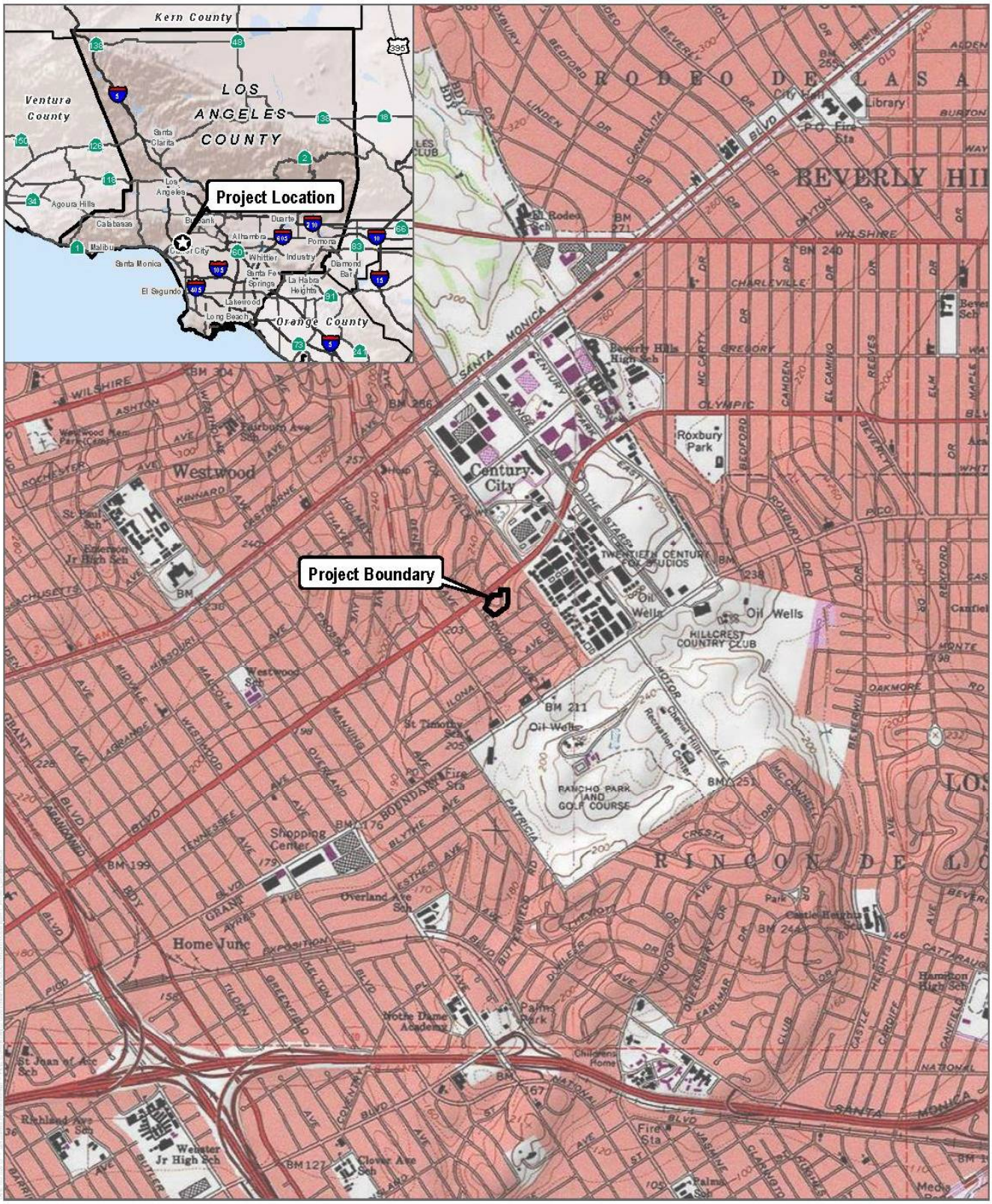
1.2 Project Location

The proposed Project Site falls on public land survey system Township 1 South, Range 15 West, within Section 26 of the *Beverly Hills*, California 7.5-minute United Stated Geologic Survey Quadrangle (USGS) (Figure 1). Specifically, the proposed Project Site is located on a 2.22-acre site (96,792 square feet), located at 10328-10384 and 10341-10381 Bellwood Avenue in the West Los Angeles Community Plan area of the City of Los Angeles (Figure 2). The proposed Project Site is irregularly shaped and is bifurcated by Bellwood Avenue. Adjacent to the proposed Project Site, Bellwood Avenue is a U-shaped street that connects to Olympic Boulevard at each end. The proposed Project Site includes parcels located generally north/west and east/south of Bellwood Avenue as well as the portion of Bellwood Avenue that bifurcates the proposed Project Site.

1.3 Project Description

The Project proposes to develop a new eldercare facility for persons 62 years of age and older to provide services and assistance for the daily living needs of its residents. The proposed Project would include 192 senior housing residential units, comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms; 50,463 square feet of indoor common areas that include space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area; and 14,630 square feet of outdoor common areas, including several courtyards and terraces that would be distributed throughout the proposed Project Site. The

proposed uses would be located within a single building ranging in height from 38 feet to 70 feet, or three-to six stories. A total of 140 vehicle parking spaces would be provided within two subterranean levels beneath the proposed building that would extend to a depth of 30-feet. Three existing multi-family residential developments with a total of 112 residential units and 43,939 square feet would be removed to accommodate the proposed Project. Additionally, the proposed Project includes the vacation and realignment of the portion of Bellwood Avenue that currently bifurcates the proposed Project Site.



SOURCE: USGS 7.5-Minute Series Beverly Hills Quadrangle
Township 1S / Range 15W / Section 26

DUDEK

0 1,000 2,000 Feet
0 250 500 Meters

FIGURE 1
Project Location
Bellwood Avenue Project

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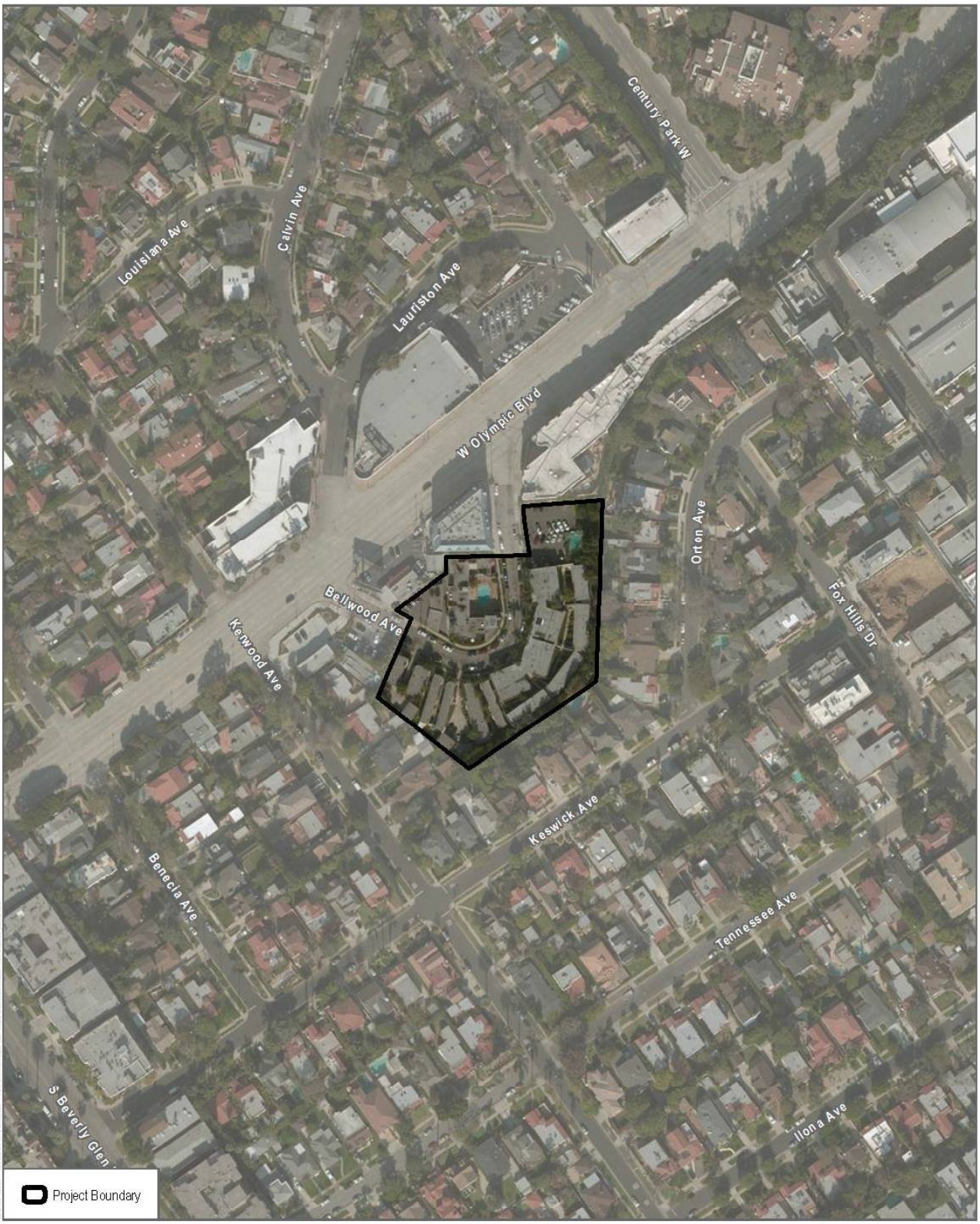

SOURCE: Bing Maps 2019; Los Angeles County 2017

DUDEK

0 100 200 Feet
0 25 50 Meters
1:2,400

FIGURE 2
Project Aerial
Bellwood Avenue Project

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2 REGULATORY SETTING

This section includes a discussion of the applicable state laws, ordinances, regulations, and standards governing cultural resources, which must be adhered to before and during construction of the proposed Project.

2.1 State

2.1.1 The California Register of Historical Resources (CRHR)

In California, the term "historical resource" includes, but is not limited to, "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code (PRC), Section 5020.1(j)). In 1992, the California legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1(a)). The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP), enumerated below. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 California Code of Regulations [CCR] 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

2.1.2 California Environmental Quality Act

As described further, the following CEQA statutes (PRC Section 21000 et seq.) and CEQA Guidelines (14 CCR 15000 et seq.) are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- PRC Section 21083.2(g) defines "unique archaeological resource."
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) defines "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource"; it also defines the circumstances when a project would materially impair the significance of a historical resource.
- PRC Section 21074(a) defines "tribal cultural resources."
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- PRC Sections 21083.2(b) and 21083.2(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures. Preservation in place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; CEQA Guidelines Section 15064.5(b)). If a site is listed or eligible for listing in the CRHR, or included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1(q)), it is an "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (PRC Section 21084.1; CEQA Guidelines Section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (PRC Section 21084.1; CEQA Guidelines Section 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines Section 15064.5(b)(1); PRC Section 5020.1(q)). In turn, the significance of a historical resource is materially impaired when a project does any of the following:

(1) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or

(2) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(3) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA (CEQA Guidelines Section 15064.5(b)(2)).

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.2(a)–(c)).

Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC Section 21083.2(g)).

Impacts on nonunique archaeological resources are generally not considered a significant environmental impact (PRC Section 21083.2(a); CEQA Guidelines Section 15064.5(c)(4)). However, if a nonunique archaeological resource qualifies as a TCR (PRC Sections 21074(c) and 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in PRC Section 5097.98.

California State Assembly Bill 52

Assembly Bill (AB) 52 of 2014 amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 established that TCRs must be considered under CEQA and also provided for additional Native American consultation requirements for the lead agency. Section 21074 describes a TCR as a site, feature, place, cultural landscape, sacred place, or object that is considered of cultural value to a California Native American Tribe and that is either:

- On or determined to be eligible for the California Register of Historical Resources or a local historic register; or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1.

AB 52 formalizes the lead agency–tribal consultation process, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with the project site, including tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report.

Section 1 (a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment." Effects on TCRs should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to tribal cultural resources, the consultation shall include those topics (PRC Section 21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3[a]).

2.1.3 California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the county coroner has examined the remains (Section 7050.5(b)). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact NAHC within 24 hours (Section 7050.5(c)). NAHC will notify the "most likely descendant." With the permission of the landowner, the most likely descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the most likely descendant by NAHC. The most likely

descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains, and items associated with Native Americans.

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3 ENVIRONMENTAL SETTING

3.1 Environmental Setting and Current Conditions

The Project Site is located within the Transverse Range Geomorphic Province within the northeast portion of the Los Angeles Basin. Situated approximately 6-miles east of the Pacific Ocean and 10.5-miles west of the Los Angeles River, the Project Site is along the vestiges of the southern reaching foothills of the Santa Monica Mountains. The proposed Project Site is on the western slope of a southern trending low-lying ridge. The surrounding area is characterized by hilly terrain with elevation at the Project Site averaging 221 feet above mean sea level sloping upwards northeast. The Project Site is underlain by Pleistocene San Pedro formation alluvium generated by the Beverly Hills to the northeast. Soils are dominated by the Urban land-Sepulveda-Pierview complex and the Urban land-Anthraltic Xerothents, loamy substratum-Grommet complex (CDWR 1961, USDA 2019).

The Project Site is currently developed with several multi-family residential buildings and associated structures and parking and includes the portion of Bellwood Avenue that bifurcates the proposed Project Site. Specifically, the Project Site encompasses three multi-family residential developments totaling 112 units and 43,939 square feet. These three multi-family residential developments include a two-story, 13-unit building located at 10341–10381 Bellwood Avenue; seven, two-story buildings with a total of 55 units located at 10328-10366 Bellwood Avenue; and six bungalow court buildings located at 10368-10384 Bellwood Avenue with a total of 44 units. Existing landscaping within the Project Site includes several shrubs and trees.

The Project Site includes parcels located generally north/west and east/south of Bellwood Avenue. The portion of the Project Site located generally north/west of Bellwood Avenue is bounded by the Century Park hotel to the north, Bellwood Avenue and multi-family residential uses to the east and south, and a small commercial shopping center to the west that includes a cleaners and a smog check station. The portion of the Project Site located east and south of Bellwood Avenue is generally bounded by a Courtyard by Marriott hotel and Bellwood Avenue to the north, single-family residential uses to the east and south, and a beauty salon to the west.

Along the southern and eastern boundaries of the Project Site there is a grade difference ranging between approximately 14 feet to 42 feet from the adjacent single-family residential uses such that the proposed Project Site is situated below the adjacent single-family residential uses. This sloping topography continues across the Project Site and surroundings towards Olympic Boulevard.

Beyond the immediate surroundings of the Project Site are additional commercial and office uses along Olympic Boulevard, including a Ralph's grocery store located to the north and a Goodwill Donation Center to the west. Single- and multi-family residential uses continue east and south of the proposed Project Site. Additionally, the Project Site is located 0.5 mile south of the Century City commercial district.

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4 CULTURAL SETTING

4.1 Prehistoric Overview

Evidence for continuous human occupation in Southern California spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad period have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. To be more inclusive, this research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC–AD 500), Late Prehistoric (AD 500–1769), and Ethnohistoric (post-AD 1769).

4.1.1 Paleoindian Period (pre-5500 BC)

Evidence for Paleoindian occupation in the region is tenuous. Our knowledge of associated cultural pattern(s) is informed by a relatively sparse body of data that has been collected from within an area extending from coastal San Diego, through the Mojave Desert, and beyond. One of the earliest dated archaeological assemblages in the region is located in coastal Southern California (though contemporaneous sites are present in the Channel Islands) derives from SDI-4669/W-12 in La Jolla. A human burial from SDI-4669 was radiocarbon dated to 9,590–9,920 years before present (95.4% probability) (Hector 2006). The burial is part of a larger site complex that contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of ground stone, battered cobbles, and expedient flake tools). In contrast, typical Paleoindian assemblages include large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of ground stone tools. Prime examples of this pattern are sites that were studied by Emma Lou Davis (1978) on Naval Air Weapons Station China Lake near Ridgecrest, California. These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (MNO-679)—a multi-component fluted point site, and MNO-680—a single component Great Basined Stemmed point site (see Basgall et al. 2002). At MNO-679 and -680, ground stone tools were rare while finely made projectile points were common.

Warren et al. (2004) claimed that a biface manufacturing tradition present at the Harris site complex (SDI-149) is representative of typical Paleoindian occupation in the region that possibly dates between 10,365 and 8,200 BC (Warren et al. 2004). Termed San Dieguito (see also Rogers 1945), assemblages at the Harris site are qualitatively distinct from most others in region because the site has large numbers of finely made bifaces (including projectile points), formal flake tools, a biface reduction trajectory, and relatively small amounts of processing tools (see also Warren 1968). Despite the unique assemblage composition, the definition of San Dieguito as a separate cultural tradition is hotly debated. Gallegos (1987) suggested that the San Dieguito pattern is simply an inland manifestation of a broader economic pattern. Gallegos's interpretation of San Dieguito has been widely accepted in recent years, in part because of the difficulty in distinguishing San Dieguito components

from other assemblage constituents. In other words, it is easier to ignore San Dieguito as a distinct socioeconomic pattern than it is to draw it out of mixed assemblages.

The large number of finished bifaces (i.e., projectile points and non-projectile blades), along with large numbers of formal flake tools at the Harris site complex, is very different than nearly all other assemblages throughout the region, regardless of age. Warren et al. (2004) made this point, tabulating basic assemblage constituents for key early Holocene sites. Producing finely made bifaces and formal flake tools implies that relatively large amounts of time were spent for tool manufacture. Such a strategy contrasts with the expedient flake-based tools and cobble-core reduction strategy that typifies non-San Dieguito Archaic sites. It can be inferred from the uniquely high degree of San Dieguito assemblage formality that the Harris site complex represents a distinct economic strategy from non-San Dieguito assemblages.

San Dieguito sites are rare in the inland valleys, with one possible candidate, RIV-2798/H, located on the shore of Lake Elsinore. Excavations at Locus B at RIV-2798/H produced a toolkit consisting predominately of flaked stone tools, including crescents, points, and bifaces, and lesser amounts of groundstone tools, among other items (Grenda 1997). A calibrated and reservoir-corrected radiocarbon date from a shell produced a date of 6630 BC. Grenda (1997) suggested this site represents seasonal exploitation of lacustrine resources and small game and resembles coastal San Dieguito assemblages and spatial patterning.

If San Dieguito truly represents a distinct socioeconomic strategy from the non-San Dieguito Archaic processing regime, its rarity implies that it was not only short-lived, but that it was not as economically successful as the Archaic strategy. Such a conclusion would fit with other trends in Southern California deserts, where hunting-related tools were replaced by processing tools during the early Holocene (see Basgall and Hall 1990).

4.1.2 Archaic Period (8000 BC – AD 500)

The more than 2,500-year overlap between the presumed age of Paleoindian occupations and the Archaic period highlights the difficulty in defining a cultural chronology in Southern California. If San Dieguito is the only recognized Paleoindian component in the coastal Southern California, then the dominance of hunting tools implies that it derives from Great Basin adaptive strategies and is not necessarily a local adaptation. Warren et al. (2004) admitted as much, citing strong desert connections with San Dieguito. Thus, the Archaic pattern is the earliest local socioeconomic adaptation in the region (see Hale 2001, 2009).

The Archaic pattern, which has also been termed the Millingstone Horizon (among others), is relatively easy to define with assemblages that consist primarily of processing tools, such as millingstones, handstones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across the region with little variability in tool composition. Low assemblage variability over time and space among Archaic sites has been equated with cultural conservatism (see Basgall and Hall 1990; Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurred until the

bow and arrow was adopted around AD 500, as well as ceramics at approximately the same time (Griset 1996; Hale 2009). Even then, assemblage formality remained low. After the bow was adopted, small arrow points appear in large quantities and already low amounts of formal flake tools are replaced by increasing amounts of expedient flake tools. Similarly, shaped millingstones and handstones decreased in proportion relative to expedient, unshaped ground stone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as hard to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complemented only by the addition of the bow and ceramics.

4.1.3 Late Prehistoric Period (AD 500–1769)

The period of time following the Archaic and before Ethnohistoric times (AD 1769) is commonly referred to as the Late Prehistoric (Rogers 1945; Wallace 1955; Warren et al. 2004); however, several other subdivisions continue to be used to describe various shifts in assemblage composition. In general, this period is defined by the addition of arrow points and ceramics, as well as the widespread use of bedrock mortars. The fundamental Late Prehistoric assemblage is very similar to the Archaic pattern, but includes arrow points and large quantities of fine debitage from producing arrow points, ceramics, and cremations. The appearance of mortars and pestles is difficult to place in time because most mortars are on bedrock surfaces. Some argue that the Ethnohistoric intensive acorn economy extends as far back as AD 500 (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles, occurred before AD 1400. Millingstones and handstones persisted in higher frequencies than mortars and pestles until the last 500 years (Basgall and Hall 1990); even then, weighing the economic significance of millingstone-handstone versus mortar-pestle technology is tenuous due to incomplete information on archaeological assemblages.

4.2 Ethnographic Overview

The history of the Native American communities prior to the mid-1700s has largely been reconstructed through later mission-period and early ethnographic accounts. The first records of the Native American inhabitants of the region come predominantly from European merchants, missionaries, military personnel, and explorers. These brief, and generally peripheral, accounts were prepared with the intent of furthering respective colonial and economic aims and were combined with observations of the landscape. They were not intended to be unbiased accounts regarding the cultural structures and community practices of cultural groups. The establishment of the missions in the region brought more extensive documentation of Native American communities, though these groups did not become the focus of formal and in-depth ethnographic study until the early twentieth century (Bean and Shipek 1978; Boscana 1846; Geiger and Meighan 1976; Harrington 1934; Laylander 2000; Sparkman 1908; White 1963). The principal intent of these researchers was to record the precontact, culturally specific practices, ideologies, and languages that had survived the destabilizing effects of missionization and colonialism. This research, often understood as "salvage ethnography," was driven by the understanding that traditional knowledge was being lost due to the impacts of modernization and cultural assimilation. Alfred Kroeber applied his "memory culture" approach (Lightfoot 2005: 32) by recording languages

and oral histories within the region. Ethnographic research by Dubois, Kroeber, Harrington, Spier, and others during the early twentieth century seemed to indicate that traditional cultural practices and beliefs survived among local Native American communities.

It is important to note that even though there were many informants for these early ethnographies who were able to provide information from personal experiences about native life before the Europeans, a significantly large proportion of these informants were born after 1850 (Heizer and Nissen 1973); therefore, the documentation of pre-contact, aboriginal culture was being increasingly supplied by individuals born in California after considerable contact with Europeans. As Robert F. Heizer (1978) stated, this is an important issue to note when examining these ethnographies, since considerable culture change had undoubtedly occurred by 1850 among the Native American survivors of California. This is also a particularly important consideration for studies focused on TCRs; where concepts of "cultural resource" and the importance of traditional cultural places are intended to be interpreted based on the values expressed by present-day Native American representatives and may vary from archaeological values (Giacinto 2012).

Based on ethnographic information, it is believed that at least 88 different languages were spoken from Baja California Sur to the southern Oregon state border at the time of Spanish contact (Johnson and Lorenz 2006, p. 34). The distribution of recorded Native American languages has been dispersed as a geographic mosaic across California through six primary language families (Golla 2007).

Victor Golla has contended that one can interpret the amount of variability within specific language groups as being associated with the relative "time depth" of the speaking populations (Golla 2007: 80) A large amount of variation within the language of a group represents a greater time depth then a group's language with less internal diversity. One method that he has employed is by drawing comparisons with historically documented changes in Germanic and Romantic language groups. Golla has observed that the "absolute chronology of the internal diversification within a language family" can be correlated with archaeological dates (2007:71). This type of interpretation is modeled on concepts of genetic drift and gene flows that are associated with migration and population isolation in the biological sciences.

The tribes of this area have traditionally spoken Takic languages that may be assigned to the larger Uto–Aztecan family (Golla 2007, p. 74). These groups include the Gabrielino (alternately Gabrieleño), Cahuilla, and Serrano. Golla has interpreted the amount of internal diversity within these language-speaking communities to reflect a time depth of approximately 2,000 years. Other researchers have contended that Takic may have diverged from Uto–Aztecan ca. 2600 BC–AD 1, which was later followed by the diversification within the Takic speaking tribes, occurring approximately 1500 BC–AD 1000 (Laylander 2000).

4.2.1 Gabrielino (Gabrieleño)/Tongva

The archaeological record indicates that project area and vicinity was occupied by the Gabrieleño, who arrived in the Los Angeles Basin around 500 B.C. Surrounding cultural groups included the Chumash

and Tataviam to the northwest, the Serrano and Cahuilla to the northeast, and the Juaneño and Luiseño to the southeast.

The name "Gabrieliño" or "Gabrieleño" denotes those people who were administered by the Spanish from the San Gabriel Mission, which included people from the Gabrieleño area proper as well as other social groups (Bean and Smith 1978; Kroeber 1925). While this population primarily included Native American individuals local to the immediate region, individuals from surrounding areas and other tribes are also shown from records to have become members of San Gabriel Mission. As such, post-mission Gabrieleno communities may have complex historical and cultural understandings, with associations to multiple ethnic groups. Therefore, in the post-Contact period, the name does not necessarily identify a specific ethnic or tribal group. The names by which Native Americans in southern California identified themselves have, in some cases, been lost. Many modern Gabrieleño identify themselves as the Tongva (King 1994), within which there are a number of regional bands. Though the names "Tongva" or "Gabrieleño" are the most common names used by modern Native American groups, and are recognized by the Native American Heritage Commission, there are groups within the region that self-identify differently, such as the Gabrielino Band of Mission Indians - Kizh Nation. In order to be inclusive of the majority of tribal entities within the region, the name "Tongva" or "Gabrieleño" are used within this report.

Tongva lands encompassed the greater Los Angeles Basin and three Channel Islands, San Clemente, San Nicolas, and Santa Catalina. The Tongva established large, permanent villages in the fertile lowlands along rivers and streams, and in sheltered areas along the coast, stretching from the foothills of the San Gabriel Mountains to the Pacific Ocean. A total tribal population has been estimated of at least 5,000 (Bean and Smith 1978), but recent ethnohistoric work suggests a number approaching 10,000 (O'Neil 2002). Houses constructed by the Tongva were large, circular, domed structures made of willow poles thatched with tule that could hold up to 50 people (Bean and Smith 1978). Other structures served as sweathouses, menstrual huts, ceremonial enclosures, and probably communal granaries. Cleared fields for races and games, such as lacrosse and pole throwing, were created adjacent to Tongva villages (McCawley 1996). Archaeological sites composed of villages with various sized structures have been identified.

The largest, and best documented, ethnographic Tongva village in the vicinity was that of *Yanga* (also known as Yaangna, Janga, and Yabit), which was in the vicinity of the downtown Los Angeles (McCawley 1996:56-57; NEA and King 2004). This village was reportedly first documented by the Portola expedition in 1769. In 1771, Mission San Gabriel was established. Yanga provided a large number of its members to this mission; however, following the founding of the Pueblo of Los Angeles in 1781, opportunities for local paid work became increasingly common, which had the result of reducing the number of Native American neophytes from the immediately surrounding area (NEA and King 2004). Mission records indicate that 179 Gabrieleno inhabitants of Yanga were members of San Gabriel Mission (King 2000; NEA and King 2004: 104). Based on this information, Yanga may have been the most populated village in the Western Gabrieleno territory. Second in size, and less thoroughly documented, the village of Cahuenga was located slightly closer, just north of the Cahuenga Pass. The Portola party passed westward through the La Brea Tar Pits area (CA-LAN-159)

the following day. This was a known area of Native American use for hunting and the gathering of tar and other area-specific resources (Westec 1983). A pertinent excerpt from Father Juan Crespi's August 3, 1769 diary entry is provided here:

> The Captain told me that when they scouted here, in a ravine about half a league to the westward they came upon about forty springs of pitch, or tar, boiling in great surges up out of the ground, and saw very large swamps of this tar, enough to have caulked many ships. [Brown 2002:341]

The Tongva subsistence economy was centered on gathering and hunting. The surrounding environment was rich and varied, and the tribe exploited mountains, foothills, valleys, deserts, riparian, estuarine, and open and rocky coastal eco-niches. Like that of most native Californians, acorns were the staple food (an established industry by the time of the early Intermediate Period). Acorns were supplemented by the roots, leaves, seeds, and fruits of a wide variety of flora (e.g., islay, cactus, yucca, sages, and agave). Fresh water and saltwater fish, shellfish, birds, reptiles, and insects, as well as large and small mammals, were also consumed (Bean and Smith 1978: 546; Kroeber 1925; McCawley 1996).

A wide variety of tools and implements were used by the Tongva to gather and collect food resources. These included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Groups residing near the ocean used oceangoing plank canoes and tule balsa canoes for fishing, travel, and trade between the mainland and the Channel Islands (McCawley 1996).

Tongva people processed food with a variety of tools, including hammerstones and anvils, mortars and pestles, manos and metates, strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks. Food was consumed from a variety of vessels. Catalina Island steatite was used to make ollas and cooking vessels (Blackburn 1963; Kroeber 1925; McCawley 1996).

At the time of Spanish contact, the basis of Tongva religious life was the Chinigchinich religion, centered on the last of a series of heroic mythological figures. Chinigchinich gave instruction on laws and institutions, and also taught the people how to dance, the primary religious act for this society. He later withdrew into heaven, where he rewarded the faithful and punished those who disobeyed his laws (Kroeber 1925). The Chinigchinich religion seems to have been relatively new when the Spanish arrived. It was spreading south into the Southern Takic groups even as Christian missions were being built and may represent a mixture of native and Christian belief and practices (McCawley 1996).

Deceased Tongva were either buried or cremated, with inhumation more common on the Channel Islands and the neighboring mainland coast and cremation predominating on the remainder of the coast and in the interior (Harrington 1942; McCawley 1996). Cremation ashes have been found in archaeological contexts buried within stone bowls and in shell dishes (Ashby and Winterbourne 1966), as well as scattered among broken ground stone implements (Cleland et al. 2007). Archaeological data such as these correspond with ethnographic descriptions of an elaborate mourning ceremony that included a wide variety of offerings,

including seeds, stone grinding tools, otter skins, baskets, wood tools, shell beads, bone and shell ornaments, and projectile points and knives. Offerings varied with the sex and status of the deceased (Johnston 1962; McCawley 1996; Reid 1926). At the behest of the Spanish missionaries, cremation essentially ceased during the post-Contact period (McCawley 1996).

4.3 Historic-Period Overview

Post-Contact history for the State of California is generally divided into three periods: the Spanish Period (1769–1821), Mexican Period (1821–1848), and American Period (1846–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican–American War, signals the beginning of the American Period when California became a territory of the United States.

4.3.1 Spanish Period (1769–1821)

Spanish explorers made sailing expeditions along the coast of southern California between the mid-1500s and mid-1700s. In search of the legendary Northwest Passage, Juan Rodríquez Cabríllo stopped in 1542 at present-day San Diego Bay. With his crew, Cabríllo explored the shorelines of present Catalina Island as well as San Pedro and Santa Monica Bays. Much of the present California and Oregon coastline was mapped and recorded in the next half-century by Spanish naval officer Sebastián Vizcaíno. Vizcaíno's crew also landed on Santa Catalina Island and at San Pedro and Santa Monica Bays, giving each location its long-standing name. The Spanish crown laid claim to California based on the surveys conducted by Cabríllo and Vizcaíno (Bancroft 1885; Gumprecht 1999).

More than 200 years passed before Spain began the colonization and inland exploration of Alta California. The 1769 overland expedition by Captain Gaspar de Portolá marks the beginning of California's Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Baja (lower) California Native Americans, and Mexican civilians, Portolá established the Presidio of San Diego, a fortified military outpost, as the first Spanish settlement in Alta California. In July of 1769, while Portolá was exploring southern California, Franciscan Fr. Junípero Serra founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823.

The Portolá expedition first reached the present-day boundaries of Los Angeles in August 1769, thereby becoming the first Europeans to visit the area. Father Crespi named "the campsite by the river Nuestra Señora la Reina de los Angeles de la Porciúncula" or "Our Lady the Queen of the Angels of the Porciúncula." Two years later, Friar Junípero Serra returned to the valley to establish a Catholic mission, the Mission San Gabriel Arcángel, on September 8, 1771 (Kyle 2002). In 1795 Fr. Fermin Lasuen ordered a new report on possible mission sites, and the Francisco Reyes Rancho was ultimately chosen as the new mission site, with Mission San Fernando Rey

de España being formally founded in 1797 (Perkins 1957). Shortly thereafter, many of the local Gabrielino and Tataviam people were removed from their homeland, relocated to the mission, and their native lifeways taken away.

4.3.2 Mexican Period (1821–1846)

A major emphasis during the Spanish Period in California was the construction of missions and associated presidios to integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns, but just three pueblos were established during the Spanish Period, only two of which were successful and remain as California cities (San José and Los Angeles). Several factors kept growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and unrest among the indigenous population. After more than a decade of intermittent rebellion and warfare, New Spain (Mexico and the California territory) won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports open to foreign merchants (Dallas 1955).

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. Rancho San Vicente y Santa Monica, where the Project Site is located, was granted by Governor Juan Alvarado to Francisco Sepulveda in 1838. The Rancho encompasses present day Santa Monica, Brentwood, Mandeville Canyon, portions of the Santa Monica Mountains, and parts of West Los Angeles (Hoffman 1862: 63).

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of nonnative inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities.

4.3.3 American Period (1846–Present)

War in 1846 between Mexico and the United States precipitated the Battle of Chino, a clash between resident Californios and Americans in the San Bernardino area. The Mexican-American War ended with the Treaty of Guadalupe Hidalgo in 1848, ushering California into its American Period.

California officially became a state with the Compromise of 1850, which also designated Utah and New Mexico (with present-day Arizona) as U.S. Territories (Waugh 2003). Horticulture and livestock, based primarily on cattle as the currency and staple of the rancho system, continued to dominate the southern California economy through 1850s. The Gold Rush began in 1848, and with the influx of people seeking gold, cattle were no longer desired mainly for their hides but also as a source of meat and other goods. During the

1850s cattle boom, rancho vaqueros drove large herds from southern to northern California to feed that region's burgeoning mining and commercial boom. Cattle were at first driven along major trails or roads such as the Gila Trail or Southern Overland Trail, then were transported by trains when available. The cattle boom ended for southern California as neighbor states and territories drove herds to northern California at reduced prices. Operation of the huge ranchos became increasingly difficult, and droughts severely reduced their productivity (Cleland 2005).

4.4 Project Site Historic Context

4.4.1 City of Los Angeles

In 1781, a group of 11 Mexican families traveled from Mission San Gabriel Arcángel to establish a new pueblo called El Pueblo de la Reyna de Los Angeles (The Pueblo of the Queen of the Angels). This settlement consisted of a small group of adobe-brick houses and streets and would eventually be known as the Ciudad de Los Angeles (City of Angels), which incorporated on April 4, 1850, only two years after the Mexican-American War and five months prior to California achieving statehood. Settlement of the Los Angeles region continued in the early American Period. The County of Los Angeles was established on February 18, 1850, one of 27 counties established in the months prior to California acquiring official statehood in the United States. Many of the ranchos in the area now known as Los Angeles County remained intact after the United States took possession of California; however, a severe drought in the 1860s resulted in many of the ranchos being sold or otherwise acquired by Americans. Most of these ranchos were subdivided into agricultural parcels or towns (Dumke 1944). Nonetheless, ranching retained its importance, and by the late 1860s, Los Angeles was one of the top dairy production centers in the country (Rolle 2003). By 1876, Los Angeles County reportedly had a population of 30,000 persons (Dumke 1944).

Los Angeles maintained its role as a regional business center and the development of citriculture in the late 1800s and early 1900s further strengthened this status (Caughey and Caughey 1977). These factors, combined with the expansion of port facilities and railroads throughout the region, contributed to the impact of the real estate boom of the 1880s on Los Angeles (Caughey and Caughey 1977; Dumke 1944).

By the late 1800s, government leaders recognized the need for water to sustain the growing population in the Los Angeles area. Irish immigrant William Mulholland personified the city's efforts for a stable water supply (Dumke 1944; Nadeau 1997). By 1913, the City of Los Angeles had purchased large tracts of land in the Owens Valley and Mulholland planned and completed the construction of the 240-mile aqueduct that brought the valley's water to the city (Nadeau 1997).

Los Angeles continued to grow in the twentieth century, in part due to the discovery of oil in the area and its strategic location as a wartime port. The county's mild climate and successful economy continued to draw new residents in the late 1900s, with much of the county transformed from ranches and farms into residential subdivisions surrounding commercial and industrial centers. Hollywood's development into the entertainment

capital of the world and southern California's booming aerospace industry were key factors in the county's growth in the twentieth century.

5 BACKGROUND RESEARCH

5.1 SCCIC Records Search

On August 16, 2019, Dudek completed a CHRIS records search of the Project Site and a 0.5-mile search radius at the SCCIC, located on the campus of California State University, Fullerton. This search included mapped prehistoric, historical, and built-environment resources; Department of Parks and Recreation (DPR) site records; technical reports; archival resources; and ethnographic references. The confidential records search results are also provided in Confidential Appendix A.

5.1.1 Previously Conducted Cultural Resource Studies

Results of the cultural resources records search indicated that 12 previous cultural resource studies have been conducted within 0.5-mile of the Project Site between 1997 and 2014 (Table 1). None of these studies overlap or are adjacent to the Project Site.

Table 1. Previously Conducted Cultural Resource Studies within 0.5-Mile of the Proposed Project Site

SCCIC Report Number	Authors	Year	Title	Proximity to Proposed Project Site
LA-02200	Greenwood, Roberta S.	1990	Technical Report - Architectural Report - Archaeology for the Fox Studios Environmental Impact Report	Outside
LA-03623	Strudwick, Ivan H. and Jay Michalsky	1997	Cultural Resources Monitoring Report for the Crafts Building, Including a Brief History of the Movies in Relation to 20th Century-fox Studios City of Los Angeles, Los Angeles County, California	Outside
LA-04175	Strudwick, Ivan H.	1998	Completion of Monitoring of Construction Activities at 20th Century-fox Studios, CALAN-2479h, City of Los Angeles, California	Outside
LA-05033	Duke, Curt	2000	Cultural Resource Assessment for AT&T Wireless Services Facility Number R313.1, County of Los Angeles, CA	Outside
LA-05189	Holson, John	2001	Archaeological Survey and Record Search for Worldcom 1901 Avenue of the Stars, Century City Loop Project	Outside
LA-09253	Bonner, Wayne H.	2007	Cultural Resources Records Search and Site Visit Results for AT&T Candidate LAR022-51 (Avenue of the Stars & Olympic Boulevard, Los Angeles, Los Angeles County, California	Outside
LA-11005	Cogstone	2010	Westside Subway Extension Historic Property Survey Report and Cultural Resources Technical Report	Outside
LA-11306	Supernowicz, Dana	2010	Cultural Resources Study of the Hyatt Regency Century Plaza Project, AT&T Mobility Site No. EL0423, 2025 Avenue of the Stars, Los Angeles, Los Angeles County, California 90067	Outside
LA-11642	Daly, Pam and Nancy Sikes	2012	Westside Subway Extension Project, Historic Properties and Archaeological Resources Supplemental Survey Technical Reports	Outside
LA-11785	Rogers, Leslie	2012	Final Environmental Impact Statement/Final Environmental Impact Report for the Westside Subway Extension	Outside

Table 1. Previously Conducted Cultural Resource Studies within 0.5-Mile of the Proposed Project Site

SCCIC Report Number	Authors	Year	Title	Proximity to Proposed Project Site
LA-12110	Bonner, Wayne and Kathleen Crawford	2013	Cultural Records Search and Site Visit Results for AT&T Mobility, LLC Candidate EL0503 (Avenue of the Stars/Olympic Blvd) Avenue of the Stars ROW, Los Angeles, Los Angeles County, California	Outside
LA-12723	Wills, Carrie	2014	Cultural Resource Records Search and Site Visit Results for Verizon Wireless Candidate 'Empyrean' 10000 West Pico Boulevard, Los Angeles, Los Angeles County, California	Outside

5.1.2 Previously Recorded Cultural Resources

SCCIC records indicate that 15 previously recorded cultural resources are located within 0.5-mile of the Project Site. None of these resources are within or immediately adjacent to the Project Site. The previously recorded cultural resources consist of 13 historic-age buildings, one District consisting of multiple historic-age buildings, and one historic-age archaeological site (P-19-002479). The historic-age archaeological site is approximately 0.25-miles from the Project Site and consists of a sub-surface low-density deposit of historic-age trash and construction debris with temporally diagnostic material dating from the 1920s and 1930s. No prehistoric sites or resources documented to be of specific Native American origin have been previously recorded within 0.5-mile of the Project Site. Table 1 below, summarizes these previously recorded resources in additional detail.

Table 2. Previously Recorded Cultural Resources Within a 0.5-Mile of the Proposed Project Site

Primary (P-19-)	Trinomial (CA-LAN-)	Resource Age and Type	Resource Description	NRHP Eligibility	Recording Events	Proximity to Project Site
002479	2479-H	Historic-age archaeological site	Sparse buried historic-age deposit consisting of trash and construction debris that was likely associated with the initial construction of Twentieth Century Fox Studios in the 1920s and 1930s	Not evaluated	1996 (Strudwick, Ivan H., Jay Michalsky and Gary King); 1998 (Strudwick, Ivan H, J. Michalsky, and G. King)	Outside
189247	—	Historic-age Building: Hotel	Century Plaza Hotel: 2025 Avenue of the Stars (built 1965)	3: Appears eligible for the NR and CR through survey evaluation	2010 (URS Corp); 2010 (Supernowicz, Dana E.); 2011 (Daly, Pam)	Outside

Table 2. Previously Recorded Cultural Resources Within a 0.5-Mile of the Proposed Project Site

Primary (P-19-)	Trinomial (CA-LAN-)	Resource Age and Type	Resource Description	NRHP Eligibility	Recording Events	Proximity to Project Site
189251	—	Historic-age Building: Single-family property	1812-1814 Holmby Avenue (built 1931)	3: Appears eligible for the NR and CR through survey evaluation	2010 (URS Corp)	Outside
189253	—	Historic-age Building: Commercial and single-family property	"The Barn": 10300 Santa Monica Boulevard (built 1949-1950)	3: Appears eligible for the NR and CR through survey evaluation	2010 (URS Corp)	Outside
189254	—	Historic-age Building: Multiple-family property	10456 Santa Monica Boulevard (built 1937	3: Appears eligible for the NR and CR through survey evaluation	2010 (URS Corp)	Outside
189295	—	Historic-age District	Known as Century City District or Historic District 3: single-family residences built 1920s-1940s	3: Appears eligible for the NR and CR through survey evaluation	2010 (URS Corp)	Outside
189296	—	Historic-age Building: Single-family property	1948 Fox Drive (built 1936)	3: Appears eligible for the NR and CR through survey evaluation and as a contributing element to an eligible district	2010 (URS Corp)	Outside
189297	—	Historic-age Building: Single-family property	1869 Benecia Avenue (built 1936)	3: Appears eligible for the NR and CR as a contributor to an eligible district	2010 (URS Corp)	Outside
189298	—	Historic-age Building: Single-family property	1868 Benecia Avenue (built 1940)	3: Appears eligible for the NR and CR as a contributor to an eligible district	2010 (URS Corp)	Outside
189299	—	Historic-age Building: Single-family property	10338 La Grange Avenue (built 1947)	3: Appears eligible for the NR and CR as a contributor to an eligible district	2010 (URS Corp)	Outside

Table 2. Previously Recorded Cultural Resources Within a 0.5-Mile of the Proposed Project Site

Primary (P-19-)	Trinomial (CA-LAN-)	Resource Age and Type	Resource Description	NRHP Eligibility	Recording Events	Proximity to Project Site
189300	—	Historic-age Building: Single-family property	10350 La Grange Avenue (built 1936)	3: Appears eligible for the NR and CR as a contributor to an eligible district	2010 (URS Corp)	Outside
189301	—	Historic-age Building: Single-family property	10323 Dunkirk Avenue (built 1929)	3: Appears eligible for the NR and CR as a contributor to an eligible district	2010 (URS Corp)	Outside
189302	—	Historic-age Building: Single-family property	10317 Dunkirk Avenue (built 1928)	3: Appears eligible for the NR and CR as a contributor to an eligible district	2010 (URS Corp)	Outside
189303	—	Historic-age Building: Single-family property	10311 Dunkirk Avenue (built 1928)	3: Appears eligible for the NR and CR as a contributor to an eligible district	2010 (URS Corp)	Outside
190969	—	Historic-age Building: Country Club	Hillcrest Country Club: 100000 West Pico Boulevard (built circa 1920)	3S: Appears eligible for the NR through survey evaluation	2014 (Crawford, K.A.)	Outside

5.2 Review of Historical Topographic Maps and Aerial Images

Dudek consulted historical topographic maps, aerial photographs, and Sanborn Fire Insurance Maps (Sanborn Maps) to understand the development of the Project Site and surrounding area. Topographic maps are available from 1894 to 2015 and aerial images are available from 1952 to 2016 (NETR 2019). Sanborn maps were available from 1926 (Sanborn 1926).

The first topographic map dates from 1894 and shows the Project Site and surrounding area as undeveloped aside for the Pasadena and Pacific Railroad to the north and a sparse webbing of roads. The Project Site is along one of these roads, although no structures are in the vicinity of the Project Site. The 1921 topographic map no longer shows the road adjacent the proposed Project Site. To the east is an oil field with associated roads, otherwise, the Project Site and surrounding area remain undeveloped. The 1925 topographic map highlights the undeveloped terrain of the proposed Project Site and surrounding area, depicting the proposed Project Site on a western slope northeast of the confluence of two seasonal drainages. Though

the 1925 topographic map depicts the area as entirely undeveloped, the 1926 Sanborn map displays an established grid infilled with single-family dwellings. Bellwood Avenue has been constructed, while Olympic Boulevard has not. The Project Site has been subdivided into lots; however, the lots are vacant. The first available aerial photograph dates from 1952 and shows the Project Site as fully developed with the existing multi-family apartment buildings in their current configuration and Olympic Boulevard in its current alignment.

5.3 Native American Correspondence

5.3.1 NAHC Sacred Lands File Search

Dudek contacted the NAHC on August 19, 2019 to request a review of the SLF. The NAHC replied via email on September 16, 2019, stating that the SLF search was completed with negative results. Because the SLF search does not include an exhaustive list of Native American cultural resources, the NAHC suggested contacting five Native American individuals and/or tribal organizations who may have direct knowledge of cultural resources in or near the Project Site. Table 3, below, lists the five tribes on the NAHC contact list for the SLF review. No additional tribal outreach was conducted by Dudek; however, as discussed below, in compliance with AB 52, the City has contacted all NAHC-listed traditionally geographically affiliated tribal representatives that have requested project notification. Please note that the City's AB 52 list includes additional tribal representatives than those identified in the NAHC's September 16, 2019 correspondence. Documents related to the SLF search are included in Appendix B.

Table 3. Native American Heritage Commission-Listed Native American Contacts

Native American Tribal Representatives
Andrew Salas, Chairperson Gabrielino Band of Mission Indians-Kizh Nation
Anthony Morales, Chairperson Gabrielino/Tongva San Gabriel Band of Mission Indians
Sandonne Goad, Chairperson Gabrielino/Tongva Indians of California Tribal Council
Robert F. Dorame, Chairman Gabrielino Tongva Indians of California Tribal Council
Charles Alvarez, Councilmember Gabrielino-Tongva Tribe

5.3.2 Record of Assembly Bill 52 Consultation

The Project is subject to compliance with AB 52 (PRC 21074), which requires consideration of impacts to TCRs as part of the CEQA process, and requires the lead agency to notify any California groups (who have requested notification) of the Project who are traditionally or culturally affiliated with the geographic area of the Project. Pursuant to AB 52, the City sent Project notification letters on May 30, 2019 to NAHC-listed Native American tribal representatives on the City's AB 52 Contact List, which includes the five tribes suggested on the NAHC contact list for the SLF review as well as additional tribal representatives. The letters contained a project description, outline of AB 52 timing, request for consultation, and contact information for the appropriate lead agency representative. Table 4, below, summarizes the results of the AB 52 notification process for the proposed Project.

Table 4
Assembly Bill 52 Native American Tribal Outreach Results

Native American Tribal Representatives	Method and Date of Notification	Response to City Notification Letters	Consultation Date
Anthony Morales, Chairperson Gabrieleno/Tongva San Gabriel Band of Mission Indians	Certified mail; May 30, 2019	No Response	As no response was received, consultation was concluded.
Sadonne Goad, Chairperson Gabrielino/Tongva Nation	Certified mail; May 30, 2019	No Response	As no response was received, consultation was concluded.
Andrew Salas, Chairperson Gabrieleno Band of Mission Indians – Kizh Nation	Certified mail; May 30, 2019	Response received June 4, 2019 via email, requesting consulting party status.	A consultation call between the City and representatives from the Kizh Nation was held on July 31, 2019.
Charles Alvarez, Councilmember Gabrielino-Tongva Tribe	Certified mail; May 30, 2019	No Response	As no response was received, consultation was concluded.
Robert Dorame, Chairperson Gabrielino Tongva Indians of California Tribal Council	Certified mail; May 30, 2019	No Response	As no response was received, consultation was concluded.
Kimia Fatehi Fernandeño Tataviam Band of Mission Indians	Certified mail; May 30, 2019	No Response	As no response was received, consultation was concluded.
Sam Dunlap Gabrielino/Tongva Nation	Certified mail; May 30, 2019	No Response	As no response was received, consultation was concluded.
Linda Candelaria Gabrielino-Tongva Tribe	Certified mail; May 30, 2019	No Response	As no response was received, consultation was concluded.
John Valenzuela San Fernando Band of Mission Indians	Certified mail; May 30, 2019	No Response	As no response was received, consultation was concluded.

Table 4
Assembly Bill 52 Native American Tribal Outreach Results

Native American Tribal Representatives	Method and Date of Notification	Response to City Notification Letters	Consultation Date
Joseph Ontiveros Soboba Band of Luiseno Indians	Certified mail; May 30, 2019	No Response	As no response was received, consultation was concluded.
Michael Mirelez Torres Martinez Desert Cahuilla Indians	Certified mail; May 30, 2019	Response dated June 6, 2019 was received June 12, 2019 via email, deferring consultation to tribes closer to the Project area.	Declined consultation.

Chairman Andrew Salas, of the Kizh Nation, contacted the City on June 4, 2019 requesting formal consultation regarding the proposed Project. A consultation meeting between the Kizh Nation and the City was held on July 31, 2019. During the meeting, the Kizh Nation stated that Santa Monica Boulevard was a known trade route and identified the road as a cultural resource. Additionally, the Kizh Nation stated that the Project Site is near the location of medicinal natural springs, which they identified as cultural resources. Following the consultation, the Kizh Nation provided the City, via email on August 5, 2019, with screen shots of ten (10) historical map images, a screen shot of a pictorial depicting Rancho San Jose de Bueno Ayres (ca. 1840), and screen shots of two pages of text from unknown literary sources. Table 5, below, provides the Kizh Nation's summary for each respective map.

Table 5. Summary of Historic Maps Provided by the Gabrieleno Band of Mission Indians - Kizh Nation (Tribe)

Map Year	Map Source	Description of Resources in Maps
1881	10328-10384 Bellwood Ave_1881 Ranchos: Unknown Map superimposed on Google Earth	The Tribe states that this map indicates that the Project area is within the Village of Yangna. The Tribe states that all of their mainland villages overlapped each other to facilitate movement of tribal cultural resources (TCRs) throughout the landscape and to their sister tribes outside of their ancestral territory. The Tribe further states that the village use areas were usually shared between two or more adjoining villages depending on the type, quantity, quality, and availability of the natural resources. The Tribe states that for these reasons, human activities can be pronounced within the shared areas and that TCRs may be present in the soil layers from those years of human activity within that landscape. The Tribe also states that this map indicates that the Project area is within Rancho Rincon de Los Bueyes. The Tribe states that all Ranchos were placed on ancient village locations because of the available resources in that area for human sustenance. According to the Tribe, these resources include waterways, waterbodies, springs, elevated ground, and food resources. The Tribe references the verbal explanation provided during the consultation meeting and the documents and images of maps provided to the City pertaining to how Rancho Rincon de Los Bueyes was located within their ancient village of Yangna.

Table 5. Summary of Historic Maps Provided by the Gabrieleno Band of Mission Indians - Kizh Nation (Tribe)

Map Year	Map Source	Description of Resources in Maps
1898	10328-10384 Bellwood Ave_1898: Unknown Map superimposed on Google Earth	This map is a map showing railroads, subdivisions and Ranchos with a place marker for the Project Site. The Tribe states that this map indicates the Project Site's close proximity to a railroad that existed in this location. The Tribe states that all railroads were placed on top of its traditional trade routes because the first railroad planners that came out west found the topography too varied and, thus, selected paths of the Tribe's traditional trade routes, which had already been flattened by human travel over thousands of years of use. The Tribe states that: (1) there are many trade routes around the Project area; (2) these routes were also used for visiting family, going to ceremonies, accessing recreation areas, as well as foraging areas; (3) along these routes were seasonal or permanent ramadas, trade depots, and habitation areas; and (4) often along these trade routes were isolated burials and cremations of those who died along the trail. The Tribe further states that these trade routes are considered "cultural landscapes," which house objects and are therefore a TCR.
1901	Unknown Map superimposed on Google Earth	This map is a map showing railroads and Ranchos with a place marker for the Project Site. The Tribe states that this map indicates the Project Site's close proximity to a railroad that existed in this location. The Tribe states that all railroads were placed on top of its traditional trade routes because the first railroad planners that came out west found the topography too varied and, thus, selected paths of the Tribe's traditional trade routes, which had already been flattened by human travel over thousands of years of use. The Tribe states that: (1) there are many trade routes around the Project area; (2) these routes were also used for visiting family, going to ceremonies, accessing recreation areas, as well as foraging areas; (3) along these routes were seasonal or permanent ramadas, trade depots, and habitation areas; and (4) often along these trade routes were isolated burials and cremations of those who died along the trail. The Tribe further states that these trade routes are considered "cultural landscapes," which house objects and are therefore a TCR.
[1915]	Image1 (3): Indian Villages Near Courses of the Los Angeles River; **Modified map taken from Gumprecht 2001 [1999] Figure 4.2: 135), superimposed on Google Earth	No explanatory text provided by the Tribe.

Table 5. Summary of Historic Maps Provided by the Gabrieleno Band of Mission Indians - Kizh Nation (Tribe)

Map Year	Map Source	Description of Resources in Maps
1920	10328-10384 Bellwood Ave_1920: Unknown Map superimposed on Google Earth	This map is provided to show the hydrography or waterways that existed around the Project Site. The Tribe states that seasonal or permanent hamlets, permanent trade depots, ceremonial and religious sites, and burials and cremations took place along these watercourses. Additionally, the Tribe states that these waterways are considered "cultural landscapes." Furthermore, there is higher than average potential to encounter TCRs and human remains during ground-disturbing activities near larger bodies of water.
1938	10328-10384 Bellwood Ave_1938: Kirkman-Harriman Map superimposed on Google Earth	The Tribe states that this map indicates that the Project area is within the Village of Yangna. The Tribe states that all of their mainland villages overlapped each other to facilitate movement of TCRs throughout the landscape and to their sister tribes outside of their ancestral territory. The Tribe further states that the village use areas were usually shared between two or more adjoining villages depending on the type, quantity, quality, and availability of the natural resources. The Tribe states that for these reasons, human activities can be pronounced within the shared areas and that TCRs may be present in the soil layers from those years of human activity within that landscape. The Tribe states that: (1) there are many trade routes around the Project area; (2) these routes were also used for visiting family, going to ceremonies, accessing recreation areas, as well as foraging areas; (3) along these routes were seasonal or permanent ramadas, trade depots, and habitation areas; and (4) often along these trade routes were isolated burials and cremations of those who died along the trail. The Tribe further states that these trade routes are considered "cultural landscapes," which house objects and are therefore a TCR. This map is provided to also show the hydrography or waterways that existed around the Project Site. The Tribe states that seasonal or permanent hamlets, permanent trade depots, ceremonial and religious sites, and burials and cremations took place along these watercourses. Additionally, the Tribe states that these waterways are considered "cultural landscapes." Furthermore, there is higher than average potential to encounter TCRs and human remains during ground-disturbing activities near larger bodies of water.
1938	Image 3: Kirkman-Harriman Map	Previously summarized above in map "10328-10384 Bellwood Ave_1938: Kirkman-Harriman Map" that is superimposed on Google Earth
No date provided	Image 1 (2): General Project Location Map	No explanatory text provided by the Tribe.
No date provided	Image 2: Unknown Map with Ranchos	No explanatory text provided by the Tribe.

Table 5. Summary of Historic Maps Provided by the Gabrieleno Band of Mission Indians - Kizh Nation (Tribe)

Map Year	Map Source	Description of Resources in Maps
[1996]	Image 3 (1): **map from McCawley (1996) that depicts Gabrieleno Communities	No explanatory text provided by the Tribe.
Note: Years within brackets were identified by Dudek. *Note: Sources that were identified by Dudek for maps provided.		

The maps provided appear to be topographic maps, including maps of rancho boundaries and/or subdivisions, as well as the Kirkman-Harriman map (which is also provided in this report as Figure 3), a map depicting Gabrieleno communities (McCawley 1996), a map taken from Gumprecht (2001 [1999] Figure 4.2: 135) originally showing areas subject to inundation that was modified to include locations of "Indian Villages Near Courses of the Los Angeles River," and a general Project location map. Of these 10 maps, six maps are overlaid on Google Earth with place markers for the Project Site. The unknown literary sources provided by the Kizh Nation appear to be in reference to typical habitations and clothing, as well as information about villages near water sources.

In addition to the maps, unknown literary sources, and the pictorial of the Rancho San Jose de Buenos Ayres (Rancho), the Kizh Nation also provided a brief background history summarizing the Gabrieleno territory, the complexity of their subsistence technology, trade network, and ritual. The summary included a history of the village of the Yangna, including the location, its relationship with the pueblo, and the relocation of the village that may have been politically motivated, leading to the closure of the new settlement, "Pueblito". According to the summary, the displaced Yangna members were compensated and their employers were required to provide them shelter as a result. Further, the Kizh Nation provided a brief summary on the history of the Rancho and the change of ownership including land use over time. In addition, according to the Kizh Nation, the [Project] area was located within the boundaries of the Rancho.

Based on the information provided by the Kizh Nation and summarized above and in Table 5, the Tribe believes that there is a high potential to impact TCRs within the Project Site. As such, the Tribe has provided mitigation language to the City for consideration to address the potential impacts they have identified for the Project. Having received no further information, the City issued a letter closing consultation coinciding with publication of the Draft EIR. All documents relating to AB 52 consultation are provided in confidential Appendix C.

5.4 Ethnographic Research and Review of Academic Literature

Dudek reviewed pertinent academic and ethnographic literature for information pertaining to past Native American use of the Project Site. This review included consideration of sources commonly identified through consultation, including the 1938 Kirkman-Harriman Historical Map often referenced by the Kizh Nation, (Figure 3) and provided by the Kizh Nation in connection with the AB 52 consultation described above.

According to the map, the Project Site is approximately 1.5 miles south of the path of Portola's first expedition in California and is within close proximity to a mapped Native American village, located west of the Project Site, symbolized as a red structure on the map. The mapped village site and Project Site are both approximately 0.16 miles south of an unnamed, roughly east-west oriented "ancient" road. Additionally, a small southeast traveling river or tributary, approximately 0.82 miles west of the Project Site, but mapped as immediately adjacent to the previously noted Native American village site, is depicted. Also depicted on the map, over 2.5 miles west and outside of the Project Site, are two locations labeled as "spg" and likely represent natural springs. Father Juan Crespi, representative of the Franciscan Church with the Portola party, provided documentation of passage just northwest of the present-day proposed Project Site on August 4, 1769, and notes the presence of these springs. Crespi noted the following:

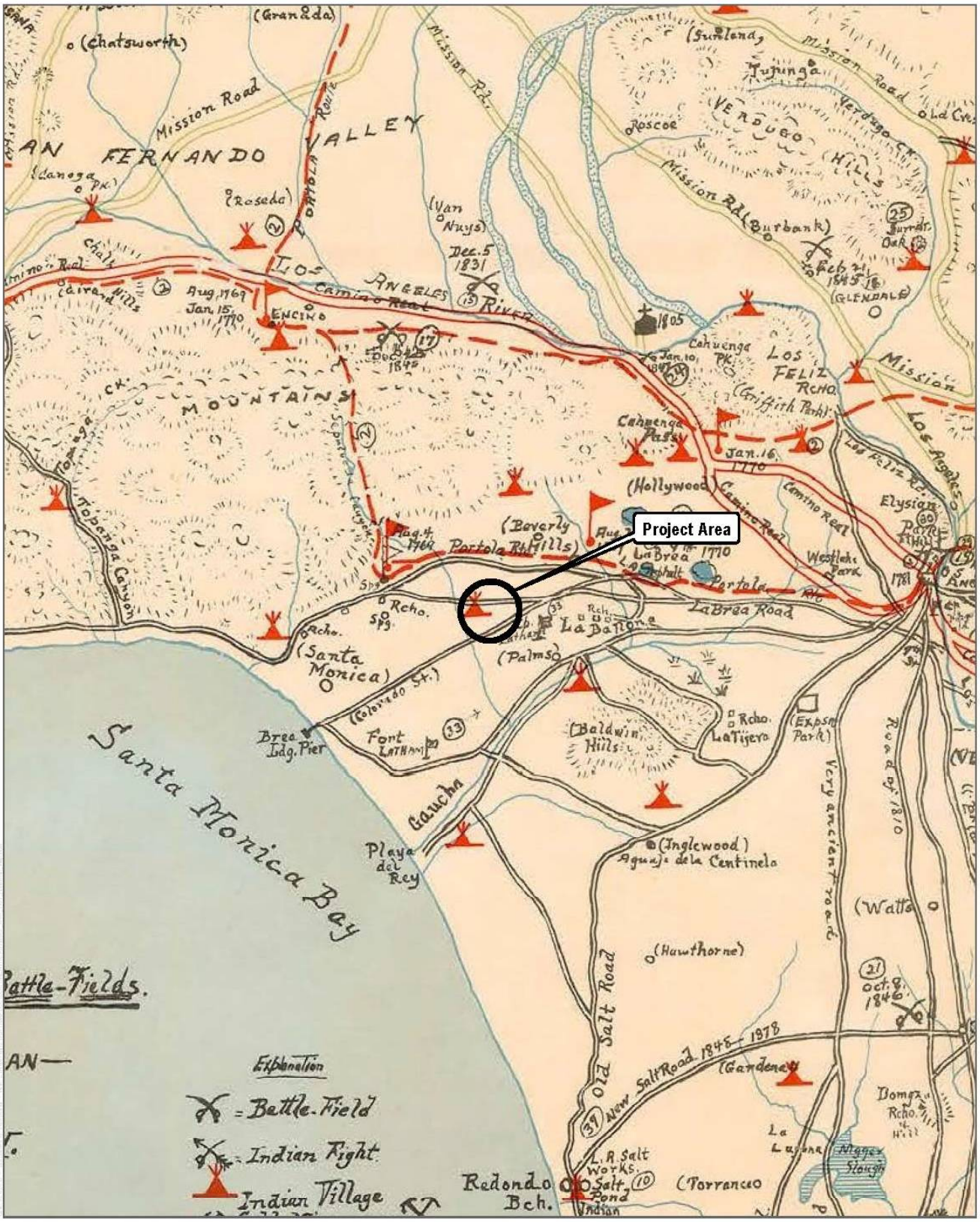
> We pursued our way northwestward and on going about quarter-league, came into a little flat hollow between small knolls, and then onward across level table-lands of dark friable soil very much grown over with dry grasses, without a single stone nor any trees, and we turned west-northwestward and on going two hours, all over level soil, came to the watering place: two springs rising at the foot of the high tableland, their origin being higher up than large plain here. A small channel of water rises from each of the springs, each one having its separate course…[Brown 2001:345, 347].

While demonstrating these consistencies with historical documentation such as that from the Portola expedition, it should be noted that this map is highly generalized due to scale and age, and may be somewhat inaccurate with regard to distance and location of mapped features. Additionally, this map was prepared based on review of historic documents and notes more than 100 years following secularization of the missions (in 1833). Although the map contains no specific primary references, it matches with the details documented by the Portola expedition (circa 1769-1770). While the map is a valuable representation of post-mission history, substantiation of the specific location and uses of the represented individual features would require review of archaeological or other primary documentation on a case-by-case basis. No information relating to the village site mapped nearest to the Project Site was provided within the reports identified during the CHRIS record search.

At the time of Portola's expedition, and through the subsequent mission period, the area surrounding the Project Site would have been occupied by Western Gabrieleño/Tongva inhabitants (Figure 4 and Figure 5). Use of Gabrielino as a language has not been documented since the 1930s (Golla 2011). One study made an effort to map the traditional Gabrieleno/Tongva cultural use area through documented family kinships included in mission records (NEA and King 2004). This process allowed for the identification of clusters of tribal villages (settlements) with greater relative frequencies of related or married individuals than surrounding areas (Figure 6). Traditional cultural use area boundaries, as informed by other ethnographic and archaeological evidence, were then drawn around these clusters of villages. The village site mapped closest to the Project was Cabuepet (or Cahuenga), located near the northern opening of the Cahuenga Pass approximately 6-7 miles to the northwest. This village was located near what is now Universal Studios. Mission

records indicate that 123 Native American members came from this village, second only to the number of members from Yanga in the Western Gabrieleno territory (NEA and King 2004). Campo de Cahuenga was also in this vicinity, which is the site where the 1847 treaty between General Andres Pico and Lieutenant-Colonel John C. Fremont marked the surrender of Mexican California to the United States (Westec 1983). The La Brea Tar Pits area (CA-LAN-159) was a known area of Native American use for hunting and the gathering of tar (Westec 1983). The largest substantiated village in the vicinity was likely Yabit (or Yanga), located approximately 8-9 miles to the northeast. Mission records indicate that 179 Gabrieleño inhabitants of Yanga became members of San Gabriel Mission, indicating that it may have been the most populated village in the Western Gabrieleño territory (NEA and King 2004: 104). In general, the mapped position of both Yanga and Cahuenga have been substantiated through archaeological evidence, although the archaeological record has been substantially compromised by rapid and early urbanization throughout much of the region. No archaeological evidence of the nearest village on the 1938 Kirkman-Harriman map was provided in the SCCIC records search results or review of other archaeological information.

Based on review of pertinent academic and ethnographic information, the proposed Project falls within the boundaries of the Gabrieleño/Tongva traditional use area. In addition, according to the Kirkman-Harriman map, the Project Site is located relatively close to a Native American village and in the vicinity of historically mapped water sources and road; however, they are outside of the Project Site. This observed, while there are some characteristics that would have been of value for prehistoric use of this area, there are similar resources available throughout the region. No recorded cultural resources of Native American origin have been identified in the Project Site or within a 0.5-mile records search buffer. In addition, consultation with traditionally affiliated Native American tribes to date has not identified any known TCRs that will be impacted by the proposed Project.



SOURCE: Kirkman - Harriman 1937 Pictorial and Historical Map of Los Angeles County: 1860-1937 AD

DUDEK

0 1.5 3 Miles
0 2.5 5 Kilometers
1:200,000

FIGURE 3

1938 Kirkman-Harriman Map

Bellwood Avenue Project

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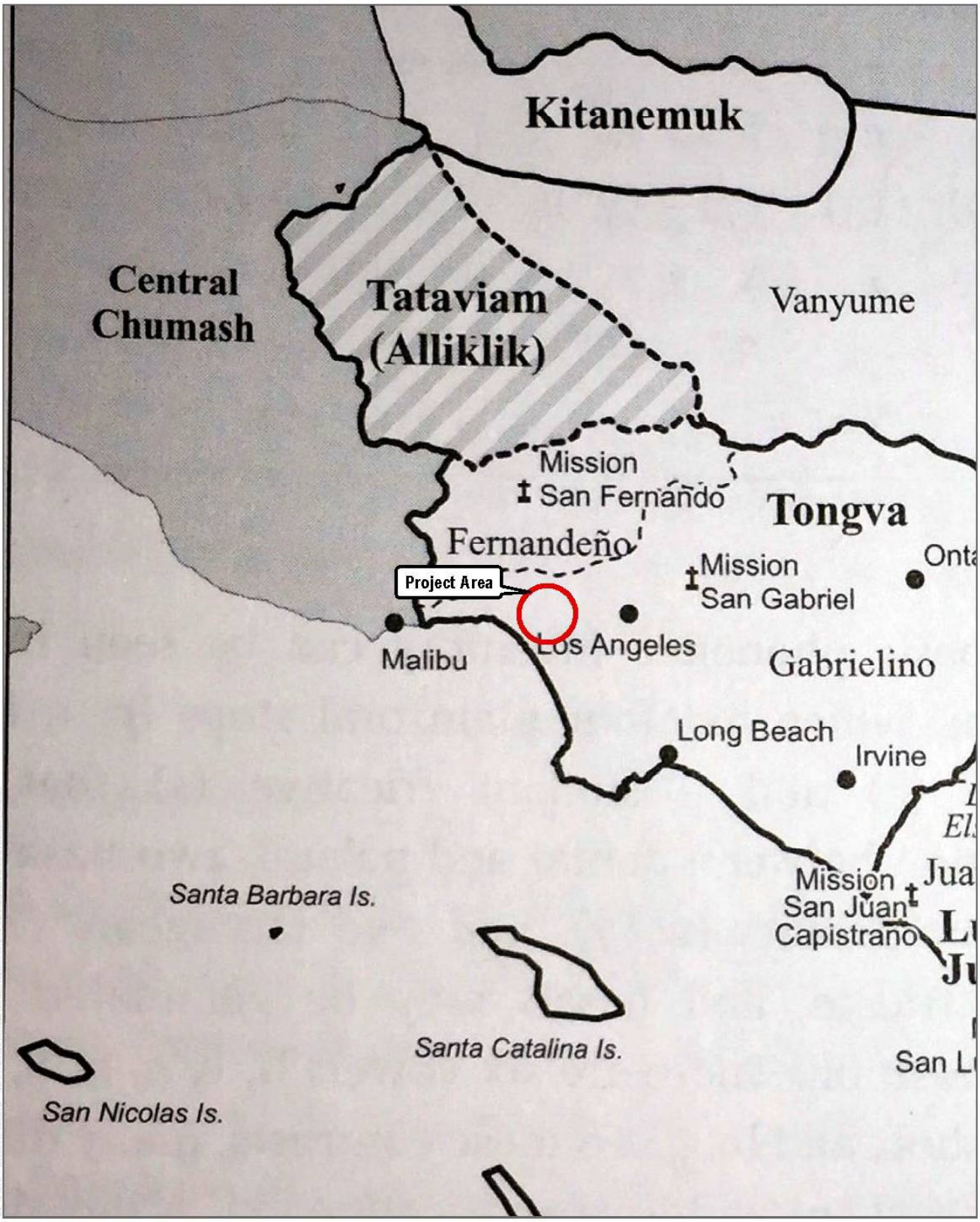

SOURCE: Golla 2011 California Indian Languages - Map 36

DUDEK

0 7.5 15 Miles
0 12.5 25 Kilometers
1:1,000,000

FIGURE 4

Traditional Linguistic and Cultural Boundaries Map - Golla

Bellwood Avenue Project

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SOURCE: Kroeber, A.L. 1925 (1976) Handbook of Indians of California

DUDEK

0 2.5 5 Miles
0 4 8 Kilometers
1:300,000

FIGURE 5

Traditional Linguistic and Cultural Boundaries Map - Kroeber

Bellwood Avenue Project

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SOURCE: NEA and King 2004 Ethnographic Overview of the Angeles National Park - Figure 2

DUDEK

FIGURE 6

Mission-Era Native American Village Map

Bellwood Avenue Project

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6 FINDINGS AND RECOMMENDATIONS

6.1 Response to Information Provided Through Consultation and Assessment of Impacts to Tribal Cultural Resources

A project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (PRC Section 21084.2.). AB 52 requires a TCR to have tangible, geographically defined properties that can be impacted by an undertaking. No Native American resources have been identified within the proposed Project Site or the surrounding search radius through the CHRIS records search (completed August 15, 2019) or through a search of the NAHC SLF (completed September 16, 2019). Furthermore, the proposed Project Site and surrounding neighborhoods have been extensively developed throughout the early to mid-twentieth century and suggests that the subsurface soils are unlikely to support intact TCRs.

Dudek reviewed the comments, documents, and maps provided by the Kizh Nation during AB 52 consultation to the City, to determine whether the proposed Project, would cause a substantial adverse impact to TCRs. The following is provided to address the Tribe's concerns as summarized in Section 5.3.2, Record of Assembly Bill 52 Consultation. The discussion below is informed by our background research, which is described in Section 5, above.

During their consultation call with the City on July 31, 2019, the Kizh Nation stated that Santa Monica Boulevard was a known trade route and that the Project Site is near the location of medicinal natural springs. These features were considered by the Tribe to be cultural resources. Review of provided documentation suggests that the nearest historically mapped "ancient" road was approximately 0.16 miles north of the Project Site. With regard to the presence of medicinal natural springs, the nearest springs are mapped on Kirkman-Harriman's 1938 map as slightly over 2.5 miles west of the Project Site. These springs were also noted in Father Crespi's diary entry dated August 4, 1769. In general, documentation provided by the Tribe does not appear to include specific information that suggests the Project could potentially impact a TCR.

Following the consultation call held on July 31, 2019, the Kizh Nation followed-up with the City via email on August 5, 2019, and provided screenshots of ten (10) maps: 1881, 1898, 1901, 1920, 1938, including two maps Dudek determined to be from 1915 and 1996. In addition to these maps, the Kizh Nation provided screen shots of text from two unknown literary sources, and one pictorial depicting Rancho San Jose Bueno Ayres (ca. 1840). The Kizh Nation also provided some background history on the Gabrieleno, the village of Yangna, and Rancho San Jose Bueno Ayres.

The Tribe provided an 1881 map and stated that the Project Site is within Rancho Rincon de Los Bueyes and that this Rancho is located within their ancient village site of Yangna. A review of the map shows that the Project Site is on the boundary line between Rancho San Jose de Buenos Ayres, a land grant made by the Mexican government to Maximo Alanis in 1843, and Rancho Rincon de Los Bueyes, a land grant made by the

Spanish Governor of Alta California to Bernardo Higuera and Cornelio Lopez in 1821. However, the map does not include any reference to the village site of Yangna. Moreover, the 1938 map provided by the Tribe, which was prepared by Kirkman-Harriman and discussed in this report in Section 5.4, Ethnographic Research and Review of Academic Literature and also included as Figure 3, indicates that the Project Site is located relatively close to a Native American village, however, this village site is outside of the boundaries of the Project Site.

The 1898 map was provided by the Tribe to show the Project Site's proximity to a railroad and within Rancho San Jose de Buenos Ayres. According to the Tribe, railroads were placed on top of traditional trade routes. According to the historical topographic map and aerial images review in Section 5.2, the Pasadena and Pacific Railroad are shown to the north and outside of the Project Site. Review of provided documentation suggests that the nearest historically mapped "ancient" road was approximately 0.16 miles north of the Project Site and therefore, the proposed Project would not impact the former location of the railroad and would remain within the confines of a previously developed parcel.

The 1901 map was provided by the Tribe to show that the Project Site is in close proximity to railroads and therefore, traditional trade routes. As previously addressed, the Pasadena and Pacific Railroad are shown to the north and outside of the Project Site and would not be impacted as part of the Project.

A 1920 map was provided by the Tribe to show the hydrography or waterways that existed around the Project Site. However, a review of the historical maps indicate that the nearest mapped tributary is approximately 0.82 miles west of the Project Site.

According to the Tribe, the 1938 Kirkman-Harriman map, which was provided twice by the Tribe (also provided in this report as Figure 3) shows that the Project Site is located within the village of Yangna and near trade routes. The Tribe also stated that the map shows the hydrography and waterways that existed around the Project Site, which provided for seasonal or permanent seasonal or permanent hamlets, trade depots, and ceremonial and religious sites. Further, the Tribe stated that these waterways are considered "cultural landscapes" and have the potential to encounter human remains during ground-disturbing activities.

However, as previously discussed in is discussed in Section 5.4, Ethnographic Research and Review of Academic Literature, which addresses the 1938 Kirkman-Harriman map, the Project Site is within general proximity to a mapped Native American village, located west of the Project Site, but is outside of the of the boundaries of the Project Site, approximately 8-9 miles to the northeast. Moreover, the village site mapped nearest to the Project Site and substantiated through the archaeological record was Cabuepet (or Cahuenga), which is located near the northern opening of the Cahuenga Pass approximately 6-7 miles to the northwest of the Project Site. Furthermore, no information relating to the village site mapped nearest to the Project Site was provided within the reports identified during the CHRIS record search. The Tribe also stated that there were many trade routes by the Project Site where railroads were placed. As previously mentioned above, the Pasadena and Pacific Railroad are shown to the north and outside of the Project Site and the nearest

historically mapped "ancient" road was approximately 0.16 miles north of the Project Site. In addition, a small southeast traveling river or tributary depicted on the 1938 map is approximately 0.82 miles west of the Project Site.

In addition to the maps discussed above, the Kizh Nation also provided four maps without any explanatory text (see Table 5 in Section 5.3.2, Record of Assembly Bill 52 Consultation). Therefore, no response with regards to those maps are provided in this report outside of the summary provided in the previous Section 5.3.2.

For these reasons, the maps, pictorial, and text submitted by the Tribe do not constitute substantial evidence that the Project could potentially cause a substantial adverse change in the significance of any TCRs.

As set forth in this report, no Native American resources have been identified within the Project Site or one-half-mile of the Project Site in the records search conducted at the SCCIC. The NAHC Sacred Lands File search likewise did not indicate the presence of Native American resources on or in close proximity to the Project Site. The Project Site and surrounding neighborhoods have been subject to extensive development during the early to mid-twentieth century. The character and severity of this past disturbance suggests that subsurface soils are likely unsuited to support the presence of intact TCRs or cultural resources. In addition, no TCRs have been identified within the Project Site through tribal consultation that would be impacted.

As such, the Project's impact on TCRs would be less than significant. Therefore, no mitigation measures are required.

6.2 Recommendations

An appropriate approach to impacts to TCRs is developed in response to the identified presence of a TCR by California Native American Tribes through the process of consultation. Government-to-government consultation initiated by the City, acting in good faith and after a reasonable effort, has not resulted in the identification of a TCR within or near the proposed Project Site. Given that no TCR has been identified, no specific mitigation for known TCRs is required.

As no TCRs have been identified that would be affected by the Project, Project impacts related to tribal cultural resources would be less than significant and no mitigation measures are necessary or required. While no TCRs are anticipated to be affected by the Project, the City has established a standard condition of approval to address inadvertent discovery of TCRs. Should a potential TCR be inadvertently identified, this condition of approval provides for temporarily halting construction activities near the encounter and notifying the City and Native American tribes that have informed the City they are traditionally and culturally affiliated with the geographic area of the proposed project. If the City determines that the potential resource appears to be a TCR (as defined by PRC Section 21074), the City would provide any affected tribe a reasonable period of time to conduct a site visit and make recommendations regarding the monitoring of future ground disturbance activities, as well as the treatment and disposition of any discovered TCRs. The Applicant would then

implement the tribe's recommendations if a qualified archaeologist reasonably concludes that the tribe's recommendations are reasonable and feasible. The recommendations would then be incorporated into a TCR monitoring plan and once the plan is approved by the City, ground disturbance activities could resume. In accordance with the condition of approval, all activities would be conducted in accordance with regulatory requirements. As a result, potential impacts to TCRs would continue to be less than significant.

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APPENDIX A (CONFIDENTIAL)

SCCIC Records Search Results

Tribal Cultural Resources confidential information:

On file with City.

APPENDIX B

Native American Heritage Commission Sacred Lands File Search

Adriane Dorrler

From: Adriane Dorrler
Sent: Monday, August 19, 2019 8:22 AM
To: nahc@nahc.ca.gov
Cc: Linda Kry; Adam Giacinto
Subject: Request for a Sacred Lands File Search_Dudek (#12132)
Attachments:

Dear NAHC,

Please find attached the NAHC Sacred Lands File Search request and project location map for the proposed Bellwood Avenue Project (Dudek #12132). Dudek is requesting a NAHC search for any sacred sites, tribal cultural resources, or other places of Native American community value that may fall within a one-mile radius of the proposed Project site.

Please let me know if you have any questions regarding this project. You can email the results to me at adorrler@dudek.com.

Thank you in advance,

Adriane Gusick
Associate Archaeologist

DUDEK
mobile: (760) 840-7556
www.dudek.com / www.facebook.com/dudeknews

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95501
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Bellwood Avenue Project (12132)

County: Los Angeles

USGS Quadrangle

Name: Beverly Hills

Township: 1S Range: 15W Section(s): 26

Company/Firm/Agency:

Dudek

Contact Person: Adriane Gusick

Street Address: 38 N Marengo Avenue

City: Pasadena Zip: 91101

Phone: (760) 840-7556 Extension:

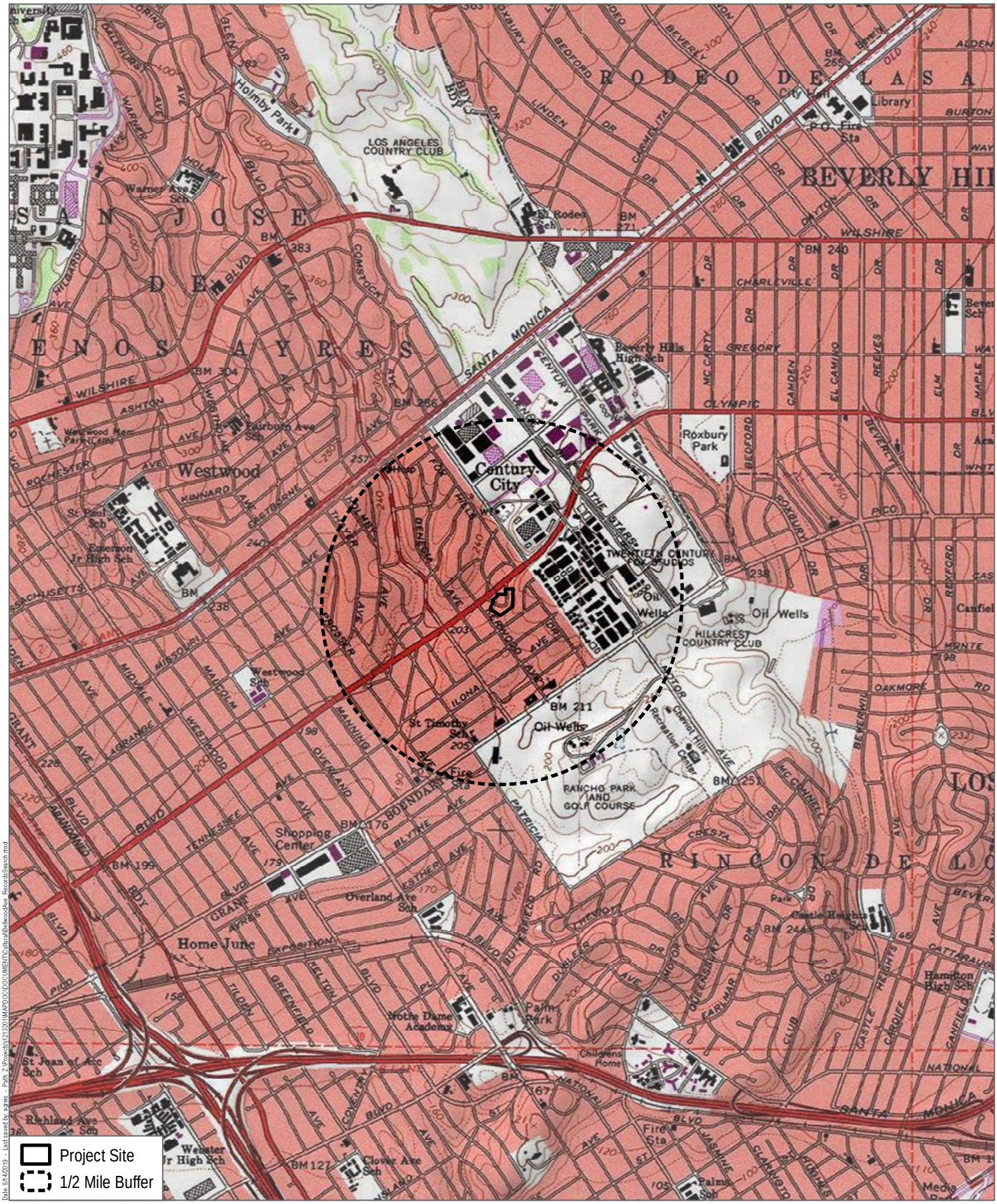
Fax: (760) 632-0164

Email: adorrler@dudek.com

Project Description:

The Bellwood Avenue Project would provide for the development of a new eldercare facility for persons 62 years of age and older on a 2.22-acre (97,792 sq ft) site located at 10328-10384 and 10341-10381 Bellwood Avenue in the West Los Angeles Community Plan area of the City of Los Angeles. The Project site includes the portion of Bellwood Avenue that bifurcates the Project site. The Project would include 192 senior housing residential units, comprised of 71 senior-independent dwelling unites, 75 assisted living guest rooms, and 46 memory care guest rooms, 50,463 sq ft of indoor common areas, and 14,630 sq ft of outdoor common areas.

☑ Project Location Map is attached



SOURCE: SOURCE: USGS 7.5-Minute Series Beverly Hills Quadrangle
Township 1S / Range 15W / Section 26

DUDEK

0 1,000 2,000 Feet
0 250 500 Meters
1:24,000

Records Search Map

Bellwood Avenue Project

Adriane Dorrler

From: Quinn, Steven@NAHC <Steven.Quinn@nahc.ca.gov>
Sent: Monday, September 16, 2019 2:29 PM
To: Adriane Dorrler
Subject: Bellwood Avenue Project
Attachments: SLFNoBellwoodAvenue 9.16.2019.pdf; BellwoodAvenue 9.16.2019.pdf

Good Afternoon,

Attached is the response to the project referenced above. If you have any additional questions, please feel nahc@nahc.ca.gov.

Regards,

Steven Quinn
Native American Heritage Commission
1550 Harbor Blvd., Suite 100

Steven.Quinn@nahc.ca.gov
Direct Line: (916) 573-1033
Office: (916) 373-3710

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

September 16, 2019

Adriane Gusick
Dudek

VIA Email to: adorrler@dudek.com

RE: Bellwood Avenue Project, Los Angeles County

Dear Ms. Gusick:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

Steven Quinn
Associate Governmental Program Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Los Angeles County
9/16/2019

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393 Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Bellwood Avenue Project, Los Angeles County.

APPENDIX C (CONFIDENTIAL)

Record of AB 52 Consultation

Tribal Cultural Resources confidential information:

On file with City.

Appendix I.2

AB 52 Notification Letters

DEPARTMENT OF
CITY PLANNING
COMMISSION OFFICE
(213) 978-1300

CITY PLANNING COMMISSION
SAMANTHA MILLMAN
PRESIDENT
VAHID KHORSAND
VICE-PRESIDENT
DAVID H. J. AMBROZ
CAROLINE CHOE
HELEN LEUNG
KAREN MACK
MARC MITCHELL
VERONICA PADILLA-CAMPOS
DANA M. PERLMAN

CITY OF LOS ANGELES
CALIFORNIA

ERIC GARCETTI
MAYOR

EXECUTIVE OFFICES
200 N. SPRING STREET, ROOM 525
LOS ANGELES, CA 90012-4801
(213) 978-1271

VINCENT P. BERTONI, AICP
DIRECTOR
KEVIN J. KELLER, AICP
EXECUTIVE OFFICER
SHANA M.M. BONSTIN
DEPUTY DIRECTOR
TRICIA KEANE
DEPUTY DIRECTOR
ARTHI L. VARMA, AICP
DEPUTY DIRECTOR
LISA M. WEBBER, AICP
DEPUTY DIRECTOR

May 30, 2019

Gabrieleño Band of Mission Indians –
Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393
Covina, CA 91723

Case No.: ENV-2018-7182-EIR
Project Address: 10328–10384 and 10341–10381 Bellwood Avenue
Community Plan: West Los Angeles

RE: AB 52 NOTIFICATION – SENIOR RESIDENTIAL COMMUNITY AT THE BELLWOOD

Dear Tribal Representative:

This letter is to inform you that the Los Angeles Department of City Planning is reviewing the following proposed project:

> The demolition of three existing multi-family residential developments containing a total of 112 residential units for the construction, use, and maintenance of an new eldercare facility for persons 62 years of age and older, containing 192 senior housing residential units, comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms within a single building ranging in height from 38 feet to 70 feet, or three to six stories. A total of 140 vehicle parking spaces that would be provided within two subterranean levels beneath the proposed building. Additionally, the Project includes the vacation and realignment of the portion of Bellwood Avenue that currently bifurcates the Project Site. The Project would comprise 241,754 square feet of floor area with a floor area ratio (FAR) of 2.66:1
>
> There are 96 ornamental trees and shrubs on site and eight (8) street trees located within the portion of Bellwood Avenue proposed to be vacated and realigned. Of these trees, 65 on-site trees would be removed, in addition to the eight (8) street trees. It is estimated that approximately 74,800 cubic yards of export material would be hauled from the Project Site. The depth of excavation for the project is approximately 30 feet below grade.

Per AB 52, you have the right to consult on a proposed public or private project prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. You have 30 calendar days from receipt of this letter to notify us in writing that you wish to consult on this project. Please provide your contact information and mail your request to:

Los Angeles Department of City Planning
Attn: Mindy Nguyen
221 North Figueroa Street, Suite 1350
Los Angeles, CA 90012
Email: mindy.nguyen@lacity.org
Phone No.: (213) 847-3674

Sincerely,

Vincent P. Bertoni, AICP
Director of Planning

Mindy Nguyen
Major Projects

Enclosure: Project Vicinity Map

DEPARTMENT OF
CITY PLANNING
COMMISSION OFFICE
(213) 978-1300

CITY PLANNING COMMISSION
SAMANTHA MILLMAN
PRESIDENT
VAHID KHORSAND
VICE-PRESIDENT
DAVID H. J. AMBROZ
CAROLINE CHOE
HELEN LEUNG
KAREN MACK
MARC MITCHELL
VERONICA PADILLA-CAMPOS
DANA M. PERLMAN

CITY OF LOS ANGELES
CALIFORNIA

ERIC GARCETTI
MAYOR

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DEPUTY DIRECTOR
TRICIA KEANE
DEPUTY DIRECTOR
ARTHI L. VARMA, AICP
DEPUTY DIRECTOR
LISA M. WEBBER, AICP
DEPUTY DIRECTOR

May 30, 2019

Fernandeño Tataviam Band of Mission Indians
Kimia Fatehi, Director, Public Relations
1019 2nd Street, Ste. 1
San Fernando, CA 91340

Case No.: ENV-2018-7182-EIR
Project Address: 10328–10384 and 10341–10381 Bellwood Avenue
Community Plan: West Los Angeles

RE: AB 52 NOTIFICATION – SENIOR RESIDENTIAL COMMUNITY AT THE BELLWOOD

Dear Tribal Representative:

This letter is to inform you that the Los Angeles Department of City Planning is reviewing the following proposed project:

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Los Angeles Department of City Planning
Attn: Mindy Nguyen
221 North Figueroa Street, Suite 1350
Los Angeles, CA 90012
Email: mindy.nguyen@lacity.org
Phone No.: (213) 847-3674

Sincerely,

Vincent P. Bertoni, AICP
Director of Planning

Mindy Nguyen
Major Projects

Enclosure: Project Vicinity Map

DEPARTMENT OF
CITY PLANNING
COMMISSION OFFICE
(213) 978-1300

CITY PLANNING COMMISSION
SAMANTHA MILLMAN
PRESIDENT
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DEPUTY DIRECTOR

May 30, 2019

Gabrielino Tongva Indians of California
Tribal Council
Robert F. Dorame, Tribal Chair/Cultural
Resources
P.O. Box 490
Bellflower, CA 90707

Case No.: ENV-2018-7182-EIR
Project Address: 10328–10384 and 10341–10381 Bellwood Avenue
Community Plan: West Los Angeles

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Director of Planning

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Major Projects

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DEPUTY DIRECTOR

May 30, 2019

Gabrielino/Tongva Nation
Sam Dunlap, Cultural Resources Director
P.O. Box 86908
Los Angeles, CA 90086

Case No.: ENV-2018-7182-EIR
Project Address: 10328–10384 and 10341–10381 Bellwood Avenue
Community Plan: West Los Angeles

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Director of Planning

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Major Projects

Enclosure: Project Vicinity Map

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LISA M. WEBBER, AICP
DEPUTY DIRECTOR

May 30, 2019

Gabrielino/Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231
Los Angeles, CA 90012

Case No.: ENV-2018-7182-EIR
Project Address: 10328–10384 and 10341–10381 Bellwood Avenue
Community Plan: West Los Angeles

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Sincerely,

Vincent P. Bertoni, AICP
Director of Planning

Mindy Nguyen
Major Projects

Enclosure: Project Vicinity Map

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DEPUTY DIRECTOR

May 30, 2019

Gabrielino/Tongva San Gabriel Band of
Mission Indians
Anthony Morales, Chairperson
P.O. Box 693
San Gabriel, CA 91778

Case No.: ENV-2018-7182-EIR
Project Address: 10328–10384 and 10341–10381 Bellwood Avenue
Community Plan: West Los Angeles

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Sincerely,

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Director of Planning

Mindy Nguyen
Major Projects

Enclosure: Project Vicinity Map

DEPARTMENT OF
CITY PLANNING
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CITY PLANNING COMMISSION
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May 30, 2019

Gabrielino-Tongva Tribe
Charles Alvarez, Co-Chairperson
23454 Vanowen Street
West Hills, CA 91307

Case No.: ENV-2018-7182-EIR
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Director of Planning

Mindy Nguyen
Major Projects

Enclosure: Project Vicinity Map

DEPARTMENT OF
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CALIFORNIA

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May 30, 2019

Gabrielino-Tongva Tribe
Linda Candelaria, Councilwoman
80839 Camino Santa Juliana
Indio, CA 92203

Case No.: ENV-2018-7182-EIR
Project Address: 10328–10384 and 10341–10381 Bellwood Avenue
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Director of Planning

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Major Projects

Enclosure: Project Vicinity Map

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May 30, 2019

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838
Newhall, CA 91322

Case No.: ENV-2018-7182-EIR
Project Address: 10328–10384 and 10341–10381 Bellwood Avenue
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May 30, 2019

Soboba Band of Luiseño Indians
Joseph Ontiveros, Cultural Resource Director
P.O. Box 487
San Jacinto, CA 92581

Case No.: ENV-2018-7182-EIR
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May 30, 2019

Torres Martinez Desert Cahuilla Indians
Michael Mirelez, Cultural Resource Coordinator
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Thermal, CA 92274

Case No.: ENV-2018-7182-EIR
Project Address: 10328–10384 and 10341–10381 Bellwood Avenue
Community Plan: West Los Angeles

RE: AB 52 NOTIFICATION – SENIOR RESIDENTIAL COMMUNITY AT THE BELLWOOD

Dear Tribal Representative:

This letter is to inform you that the Los Angeles Department of City Planning is reviewing the following proposed project:

> The demolition of three existing multi-family residential developments containing a total of 112 residential units for the construction, use, and maintenance of an new eldercare facility for persons 62 years of age and older, containing 192 senior housing residential units, comprised of 71 senior-independent dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms within a single building ranging in height from 38 feet to 70 feet, or three to six stories. A total of 140 vehicle parking spaces that would be provided within two subterranean levels beneath the proposed building. Additionally, the Project includes the vacation and realignment of the portion of Bellwood Avenue that currently bifurcates the Project Site. The Project would comprise 241,754 square feet of floor area with a floor area ratio (FAR) of 2.66:1
>
> There are 96 ornamental trees and shrubs on site and eight (8) street trees located within the portion of Bellwood Avenue proposed to be vacated and realigned. Of these trees, 65 on-site trees would be removed, in addition to the eight (8) street trees. It is estimated that approximately 74,800 cubic yards of export material would be hauled from the Project Site. The depth of excavation for the project is approximately 30 feet below grade.

Per AB 52, you have the right to consult on a proposed public or private project prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. You have 30 calendar days from receipt of this letter to notify us in writing that you wish to consult on this project. Please provide your contact information and mail your request to:

Los Angeles Department of City Planning
Attn: Mindy Nguyen
221 North Figueroa Street, Suite 1350
Los Angeles, CA 90012
Email: mindy.nguyen@lacity.org
Phone No.: (213) 847-3674

Sincerely,

Vincent P. Bertoni, AICP
Director of Planning

Mindy Nguyen
Major Projects

Enclosure: Project Vicinity Map

Appendix J

Utility Infrastructure Technical Report

WATER, SEWER, AND ENERGY
INFRASTRUCTURE ASSESSMENT REPORT

Senior Residential Community at the Bellwood

10324-10384, 10341-10381 Bellwood Avenue
Los Angeles, California 90064

Prepared For

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Date Prepared: February 20, 2020

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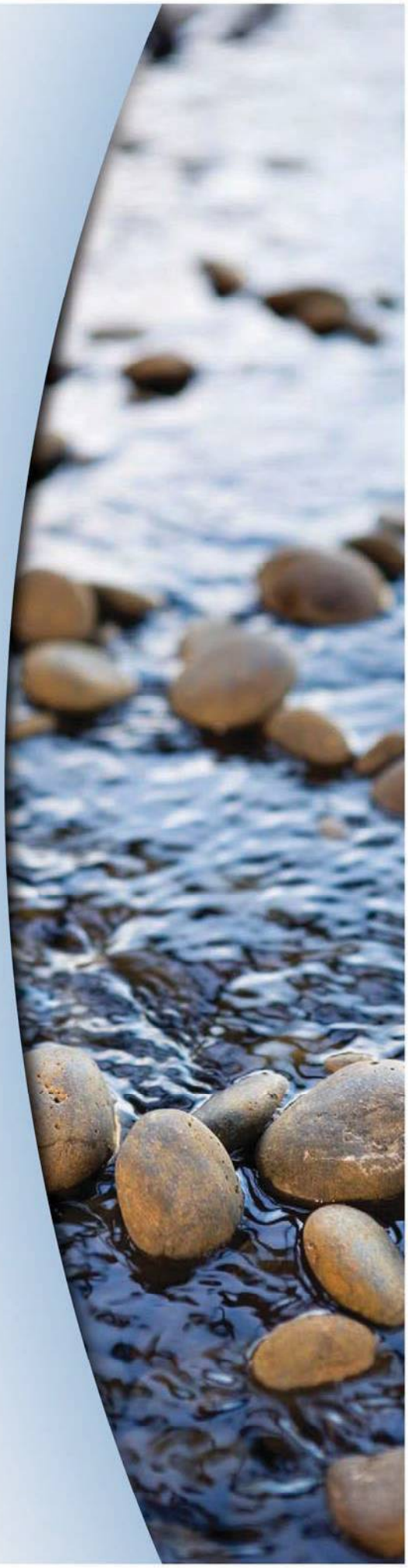

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ATTACHMENTS

Attachment A – City of Los Angeles, LADWP, Water Pressure – Flow Report (SAR) and Information on Fire Flow Availability (IFFAR)

Attachment B – Water Line Improvements Exhibit

Attachment C – LADWP Water Will Serve Letter

Attachment D – Request for Wastewater Service Information (WWSI)

Attachment E – City of Los Angeles, LADWP, Power Will Serve

Attachment F – Southern California Gas Company, SoCalGas, Gas Will Serve

1. INTRODUCTION

1.1 PROJECT DESCRIPTION

SBLP Century City, LLC (Applicant) is proposing to develop a new eldercare facility for persons 62 years of age and older (Project) on an approximately 2.22-acre site at 10328-10384 and 10341-10381 Bellwood Avenue (Project Site) in the City of Los Angeles (City). The Project Site includes the portion of Bellwood Avenue that bifurcates the Project Site and is proposed to be realigned through the Project Site. The Project Site is bounded by commercial uses adjacent to Olympic Boulevard to the north and northwest and residential uses to the west, south and east.

The existing site consists of three multi-family residential developments with a total of 43,939 sf, including 112 residential units, that would be removed to accommodate the Project. The existing development includes thirteen buildings south of Bellwood Avenue and two buildings north of Bellwood Avenue as well as associated parking areas.

The Project includes the development of a 3- to 6-story eldercare facility building over two (2) levels of substructure parking. The building would have 71 independent living dwelling units, 75 assisted living guest rooms, and 46 memory care guest rooms, totaling to 192 residential units. The residential units include 46 studios, 94 one-bedrooms and 52 two-bedrooms. The Project would comprise 241,754 sf of floor area. The Project would include approximately 50,463 sf of indoor common areas, including space for supporting services, common dining areas, a gym, indoor pool and spa, wellness center, activity rooms, family/living rooms, and building lobby and reception area, and 14,630 sf of outdoor common areas, including several courtyards and terraces that would be distributed throughout the Project Site. The Project also proposes the vacation and realignment of the portion of Bellwood Avenue that bifurcates the Project Site which would affect existing water and sewer infrastructure. The proposed Project land uses would potentially change the demands on water, sewer flows and energy systems that currently serve the Project Site.

1.2 SCOPE OF WORK

As part of the environmental impact report (EIR) for the Project, the purpose of this report is to analyze the potential impacts of the Project upon the existing water, wastewater and energy infrastructure systems. The current location of existing water, wastewater and energy infrastructure, analysis of potential Project impacts related to this infrastructure, and any applicable mitigation measures are discussed in this technical report.

2. REGULATORY FRAMEWORK

2.1 WATER

The Project Site receives water supply from the Los Angeles Department of Water and Power (LADWP), the primary water purveyor for the City. As the primary supplier of water to the City, LADWP must comply with all applicable regulations at the State and Federal level.

Applicable regulations affecting LADWP as a supplier of water include efficiency requirements, such as California Code of Regulations (CCR) Title 20, Chapter 4, Article 4, Section 1605, which requires all new plumbing fixtures to adhere to efficiency requirements, and CCR Title 24, Part 11, which requires a water use reduction of 20% above baseline for all homes, commercial, and state buildings.

The regulations also include reporting requirements, such as the California Urban Water Management Planning Act (1984) and Senate Bill (SB) 610. The California Urban Water Management Planning Act requires that municipalities and other water suppliers must create an updated Urban Water Management Plan (UWMP) every five years, outlining anticipated trends in supply and demand for the planning period. LADWP's most recent UWMP update was in 2015 and identified adequate supplies to match modeled demands through 2040. SB 610 requires water suppliers to submit a Water Supply Assessment (WSA) for all projects that propose over 500 residential dwelling units, 500,000 square feet of commercial floor space, or employ over 1,000 individuals or the equivalent water usage. A WSA will not be required for the Project as it proposes under 500 dwelling units.

2.2 WASTEWATER

The Project site is located in the City of Los Angeles, and therefore falls under the jurisdiction of the Bureau of Sanitation (BOS) of the City of Los Angeles Department of Public Works. The BOS serves over four million customers, and its sewer system is split into three subsystems – the Hyperion Sanitary Sewer System, the Terminal Island Water Reclamation Plant Sanitary Sewer System, and Regional Sanitary Sewer System. The Project Site lies within the Hyperion Sanitary Sewer System service area ("Hyperion").

Projects that discharge into the Hyperion system must follow the regulations under Ordinance No. 166,060 adopted by the City in 1990. This Ordinance established an additional annual allotment of 5 million gallons per day (MGD), of which it allocates 1.7 MGD for priority projects, 0.4 MGD for public benefit projects, and 2.9 MGD for non-priority projects.

Under the City of Los Angeles Municipal Code ("Municipal Code"), all new projects connecting to the sewer collection system or proposing additional discharge must have a Sewer Capacity Availability Request (SCAR) performed by the City (Section 64.15, Municipal Code). The SCAR analyzes existing sewer system to determine whether or not the proposed increases in wastewater flows will generate any capacity issues. New connections to the sewer system must also pay associated fees (Sewerage Facilities Charge) based upon proposed flow strength and volume (Section 64.11.2, Municipal Code). Pursuant to the City's design criteria, any new sewer laterals less than 18" must be designed for a 100-year planning period, and depth of peak dry weather flows shall not exceed one half the diameter of the pipe (d/D = 0.5).

2.3 ENERGY

2.3.1 ELECTRICITY

The Project also receives its electricity from LADWP. LADWP conducts its long-term planning through its Integrated Resources Plan document, which analyzes demand trends and potential supply sources across a 20-year period. The 2017 Integrated Resource Plan (Energy IRP) identified trends in power generation, supply, and GHG reductions across the planning period. Among the changes in supply and demand structure noted was a goal to achieve a 65 percent Renewable Portfolio Standard (RPS) by 2036.

The 2017 Energy IRP notes that LADWP will respond to increases in demand by utilizing an improved portfolio of renewable and traditional energy sources. No potential deficiencies in supply are noted across the planning period.

2.3.2 NATURAL GAS

Southern California Gas Company (SoCalGas), the Project Site's natural gas supplier, prepares an annual California Gas Report (CA Gas Report) that identifies demand forecasts as well as potential changes in supply as part of State reporting requirements (California Public Utilities Commission Decision D.95-01-039). The CA Gas Report covers an 18-year demand and forecast period through 2035. The report noted potential declines in demand across the reporting period as statewide greenhouse gas emission reduction programs and public pressure to switch to emissions-free energy sources become more prevalent. It also identified adequate supply sources to cover the projected demand scenarios through the planning period.

3. ENVIRONMENTAL SETTING

3.1 WATER

3.1.1 REGIONAL

LADWP maintains water infrastructure serving the Project area and provides domestic water service to the Project Site. LADWP receives water primarily from the Los Angeles Aqueduct (LAA), local groundwater supply, the State Water Project (SWP) and the Colorado River Aqueduct (CRA); the latter two supplied by the Metropolitan Water District of Southern California (MWD). Over the past 20 years, water supplies from the LAA have decreased due to environmental concerns resulting in more dependency on other sources of water. Approximately 57% of LADWP water supplies have come from imported SWP and CRA supplies from MWD. Approximately 12% of LADWP water supplies come from local groundwater.[1]

3.1.2 LOCAL

Available record drawings provided by the City show that currently there is a 4-inch water line splits the northerly and southerly portions of the Project Site in the existing Bellwood Avenue alignment, connecting to a 6-inch main line on Olympic Boulevard. Another existing 12-inch main line runs along the southbound side of Olympic Boulevard.

[1] Los Angeles Department of Water and Power. 2015 Urban Water Management Plan

3.1.3 ON-SITE

As described above, the Project Site is currently occupied by 112 existing residential apartment units and surface parking. Table 1 shows the estimated existing water demand for the Project Site, prepared based on 100 percent of the City of Los Angeles Bureau of Sanitation (BOS) wastewater generation factors for residential categories.

Table 1 – Existing Water Demand

Land Use	Units	Average Consumption Rate (gpd/unit)[1]	Total Average Daily Consumption (gpd)
Residential Building: Apartments	112 Units	150/Unit	16,800
		Total Existing Water Demand	16,800

Notes
[1] The average daily flow based on 100% of BOS wastewater generation factors.

The Project Site is currently served by two (2) existing fire hydrants located within 300 feet of the Project Site boundary, along the north side of Olympic Boulevard fronting the neighboring properties. The hydrants are served by the 6-inch main line in Olympic Boulevard.

3.2 WASTEWATER

3.2.1 REGIONAL

The BOS's most current Integrated Resources Plan (BOS IRP) notes that the existing design capacity of the Hyperion Service Area is approximately 550 mgd (consisting of 450 mgd at the Hyperion Treatment Plant, 80 mgd at the Donald C. Tillman Water Reclamation Plant, and 20 mgd at the Los Angeles Glendale Water Reclamation Plant), and that the existing average daily flow for the system as of 2017 is approximately 300 mgd.

3.2.2 LOCAL

The BOS provides sanitary sewer service to the Project Site through a sewer system in the surrounding streets. There is an existing 8-inch sewer main along Bellwood Avenue, which the northerly and southerly portions of the Project Site tie into. This line flows northwesterly to a 10-inch main on Olympic Boulevard and then the flow continues southwesterly along Olympic Boulevard. There is also an 8-inch sewer line south of the Project Site, which the neighboring properties to the south tie into. This 8-inch line flows southwesterly, tying into an 8-inch line in Kerwood Avenue, and then ties into the 10-inch main on Olympic Boulevard. Each of these sewer mains that are adjacent to the Project Site connect to a network of sewer lines that ultimately convey wastewater to the City's Hyperion Treatment Plant. Wastewater from the Project Site ultimately flows to the Hyperion Treatment Plant (HTP) system.

3.2.3 ON-SITE

Based on available record data from the City, there are currently ten existing sewer laterals connecting from the City's public sewer system to the Project Site. Two of these laterals serve the northerly portions of the Project Site, and the other eight serve the southerly portions of the Project Site. They all connect to the 8-inch line in Bellwood Avenue.

Table 2 shows the estimated existing wastewater generation for the Project Site, based on BOS wastewater generation factors.

Table 2 – Estimated Existing Wastewater Generation

Land Use	Units	Average Generation Factor (gpd/unit)[1]	Total Average Daily Demand (gpd)
Residential Building: Apartments	112 Units	150/Unit	16,800
		Total Existing Sewer Demand	**16,800**
Notes [1] Based on 100% of the BOS wastewater generation factors			

3.3 ENERGY

3.3.1 ELECTRICITY

3.3.1.1 REGIONAL

The LADWP is the supplier of electricity to the Project Site. LADWP's service area extends across the City of Los Angeles, serving over 1.4 million customers and 26 million megawatt-hours (MWh) of power per year. Sources of power for LADWP include hydro, coal, natural gas, and a suite of renewable energy sources.

LADWP's infrastructure includes over 10,000 miles of overhead and underground distribution lines and cable across its service area.

3.3.1.2 LOCAL

Based on substructure records there is an existing underground electrical line near the Project Site, running along Olympic Boulevard, which provides connections to the Project Site, adjacent properties and service.

3.3.1.3 ON-SITE

Existing electricity demands have been prepared based on the existing building program and are summarized in Table 3 below.

Table 3 – Estimated Existing Electricity Demands

Land Use	Units	Total Average Daily Demand (kWh/year)[1,2]
Residential Building: Apartments	112 Units	683,895
	Total Existing Electricity Demand	683,895

Notes
[1] CalEEmod was used to calculate the electricity demand based on land use.
[2] Kilowatt hours (kWh)
Source: Eyestone Environmental, 2020. See Energy Appendix in the Project Draft EIR.

3.3.2 NATURAL GAS

3.3.2.1 REGIONAL

Natural gas service to the Project Site is provided by SoCalGas. SoCalGas is the primary distributor of natural gas in Southern California, providing service to a 20,000 square-mile area. Its distribution system is the nation's largest natural gas distribution utility, and SoCalGas serves over 21.6 million customers.

3.3.2.2 LOCAL

Substructure records indicate that Southern California Gas Company operates a 3-inch gas line, fronting 16-feet west of the centerline of Bellwood Avenue, and it appears that natural gas service is provided to the Project Site via this line.

3.3.2.3 ON-SITE

Existing natural gas demand estimates have been prepared based on the existing building program and are summarized in Table 4 below.

Table 4 – Estimated Existing Natural Gas Demand

Land Use	Units	Total Average Demand (cf/year)[1,2]
Residential Building: Apartments	112 Units	1,947,257
	Total Existing Natural Gas Demand	1,947,257

Notes
[1] CalEEmod was used to calculate the natural gas demand based on land use.
[2] Cubic feet (cf)
Source: Eyestone Environmental, 2020. See Energy Appendix in the Project Draft EIR.

4. SIGNIFICANCE THRESHOLDS

4.1 WATER

Appendix G of the CEQA Guidelines provides a set of sample questions that address impacts with regard to water infrastructure. These questions are as follows:

Would the project:

- Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction or relocation of which could cause significant environmental effects?
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

In the context of these questions from the CEQA Guidelines, the City of Los Angeles CEQA Thresholds Guide determines the significance of a project on a case-by-case basis, considering the following factors:

- The total estimated water demand for the project;
- Whether sufficient capacity exists in the water infrastructure that would serve the project, taking into account the anticipated conditions at project buildout;
- The amount by which the project would cause the projected growth in population, housing or employment for the Community Plan area to be exceeded in the year of the project completion; and
- The degree to which scheduled water infrastructure improvements or project design features would reduce or offset service impacts

4.2 WASTEWATER

Appendix G of the CEQA Guidelines provides a set of sample questions that address impacts with regard to wastewater. These questions are as follows:

Would the project:

- Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction or relocation of which could cause significant environmental effects?
- Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

In the context of these questions from the CEQA Guidelines, the City of Los Angeles CEQA Thresholds Guide states that a project would normally have a significant wastewater impact if:

- The project would cause a measurable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained; or
- The project's additional wastewater flows would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan or General Plan and its elements.

These thresholds are applicable to the Project and are used to determine if the Project would have significant wastewater impacts.

4.3 ENERGY

Appendix G of the CEQA Guidelines includes a question that addresses impacts with regard to energy infrastructure. This question is:

Would the project:

- Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction or relocation of which could cause significant environmental effects?

In the context of the above thresholds, the L.A. CEQA Thresholds Guide states that a determination of significance shall be made on a case-by case basis, considering the following factor:

- The extent to which the project would require new (off-site) energy supply facilities and distribution infrastructure; or capacity enhancing alterations to existing facilities;

Based on these factors, the Project would have a significant impact on energy resources if the project would result in an increase in demand for electricity or natural gas that exceeds available supply or distribution infrastructure capabilities, or the design of the project fails to incorporate energy conservation measures that go beyond existing requirements.

5. METHODOLOGY

5.1 WATER

The methodology for determining the significance of a project as it relates to a project's impact on water supply and distribution infrastructure is based on the City of Los Angeles CEQA Thresholds Guide. This methodology involves a review of the project's environmental setting, project impacts, cumulative impacts, and mitigation measures as required. The following has been considered as part of the determination for this Project:

Environmental Setting

- Description of major water infrastructure serving the Project Site, including the type of facilities, location and sizes, and any planned improvements
- Description of the water conditions for the Project area and known improvement plans

Project Impacts

- Evaluate the Project's water demand, taking into account design or operational features that would reduce/offset water demand.
- Determine what improvements would be needed, if any, to adequately serve the Project.
- Describe the degree to which presently scheduled off-site improvements offset impacts.
- This report analyzes the potential impacts of the Project on the existing public water infrastructure by comparing the estimated Project demand with the calculated available capacity of the existing facilities.

Based on available site and occupancy information, the BOS sewer generation factors were employed to estimate the existing water consumption. In addition, LADWP performed a flow test to determine if available water conveyance exists for future development. LADWP's approach consists of data ranging from available static pressure (how much pressure is available at the source before applying the Project's demand), to the available pressure at the maximum demand needed for the Project. See Attachment A for LADWP's Water Pressure – Flow Report (SAR) for the Project as well as the Information on Fire Flow Availability Report (IFFAR).

5.2 WASTEWATER

The methodology for determining the significance of a project as it relates to a project's impact on wastewater collection and treatment infrastructure is based on the City of Los Angeles CEQA Thresholds Guide. This methodology involves a review of the project's environmental setting, project impacts, cumulative impacts, and mitigation measures as required. The following has been considered as part of the determination for this Project:

Environmental Setting

- Location of the Project and appropriate points of connection to the wastewater collection system on the pertinent Sewer Wye Map;
- Description of the existing wastewater system which would serve the Project, including its capacity and current flows.

Project Impacts

- Evaluate the Project wastewater needs (anticipated daily average wastewater flow), taking into account design or operational features that would reduce or offset service impacts;
- Compare the Project's wastewater needs to the appropriate sewer's capacity and/or the wastewater flows anticipated in the Wastewater Facilities Plan or General Plan.

- This report analyzes the potential impacts of the Project on the existing public sewer infrastructure by comparing the estimated Project demand with the calculated available capacity of the existing facilities.

The BOS Wastewater Engineering Division made a preliminary analysis of the local and regional sewer conditions to determine if available wastewater conveyance and treatment capacity exists for future development. The WWSI prepared for the Project, which contains the results of the BOS preliminary analysis is included in Attachment D. Additional permitting (e.g. SCAR submittals) may be required by BOS.

5.3 ENERGY

The methodology for determining the significance of a project as it relates to a project's impact on energy infrastructure is based on the City of Los Angeles CEQA Thresholds Guide. This methodology involves a review of the project's environmental setting, project impacts, cumulative impacts, and mitigation measures as required. The following has been considered as part of the determination for this Project:

Environmental Setting

- Description of the electricity and natural gas supply and distribution infrastructure serving the project site. Include plans for new transmission facilities or existing facilities.
- Summary of adopted energy conservation plans and policies relevant to the project,

Project Impacts

- Evaluation of the new energy supply and distribution systems which the project would require.
- Describe the energy conservation features that would be incorporated into project design and/or operation that go beyond City requirements, or that would reduce the energy demand typically expected for the type of project proposed.
- Consult with the DWP or the Gas Company, if necessary, to gauge the anticipated supply and demand conditions at project buildout.

This report analyzes the potential impact of the Project on existing energy infrastructure by examining existing and buildout conditions for energy usage. A will-serve letter from LADWP shows availability of sufficient energy resources to supply the Project's demand. Additional analysis of the SoCalGas natural gas projections for future capacity was also performed to ensure adequate capacity to provide natural gas to the Project and other projects within the SoCalGas service area.

6. PROJECT IMPACTS

6.1 CONSTRUCTION

6.1.1 WATER

During construction, water will be required intermittently for dust control, equipment cleaning, soil grading and preparation during the early phases of the Project. The latter phases of construction normally require less water usage. Construction water demands are typically less than the long term operational water demand of a project and are temporary. For purposes of analysis, peak water demand during Project construction is estimated to be approximately 1,000 gpd, based on the site disturbance area and Project scale. It is anticipated that existing water infrastructure would be sufficient to meet the limited, temporary water demand associated with construction of the Project. Therefore, impacts to water infrastructure due to construction activity are considered less than significant.

The Project will require relocation of the existing water lines that serve the Project Site, and construction of new on-site water distribution lines to serve the new building (see Attachment B and Section 6.2.1.2). This is due to the proposed realignment of Bellwood Avenue which currently bifurcates the north and south portions of the Project Site. The drive aisle for the portion of Bellwood Avenue in the Project Site is proposed to be realigned further north of its existing location and the existing 4-inch line would be decommissioned, removed and replaced with two new distinct water main extensions including approximately 250 feet of new 8-inch line to be installed in the easterly drive aisle of Bellwood Avenue and approximately 213 feet of new 8-inch line to be installed in the westerly drive aisle of Bellwood Avenue. These two new 8-inch main lines would tie into the existing 12-inch main in Olympic Boulevard. Prior to buildout of the water system, with approval from LADWP and the City, temporary water supply needs during construction may be obtained from existing metered water connections or fire hydrants. Construction impacts associated with the installation of water distribution lines would primarily involve trenching to place the lines below surface. Installation of new water infrastructure will be limited to on-site water distribution and off-site work associated with installation of the new 8-inch water lines and connections to the public main in Olympic Boulevard. Prior to ground disturbance, Project contractors would coordinate with LADWP to identify the locations and depths of all lines. Further, LADWP would be notified in advance of proposed ground disturbance activities to avoid existing water lines and disruption of water service. Finally, a Construction Management Plan, which would ensure safe pedestrian access as well as emergency vehicle access and safe vehicle travel in general, will be implemented to reduce any temporary pedestrian and traffic impacts occurring as a result of construction activities. Therefore, Project impacts on water infrastructure associated with construction activities would be less than significant.

6.1.2 WASTEWATER

Construction activities for the Project could result in temporary wastewater generation on-site. However, such use would be temporary and nominal when compared with the wastewater generated by the Project. In addition, construction workers would typically utilize portable restrooms and hand wash areas, which would not contribute to direct wastewater flows to the City's wastewater system. Thus, wastewater generation from Project construction activities is not

anticipated to cause any measurable increase in wastewater flows. Therefore, the Project's construction impacts to the wastewater system would be less than significant.

The Project will require the abandonment and removal of the existing 325 feet of the 8-inch sewer line in Bellwood Avenue on the Project Site and adjacent on-site lateral lines; and construction of on-site wastewater infrastructure to serve the new building, and potential limited extension/upgrade and/or relocation of existing adjacent public wastewater infrastructure. Construction impacts associated with wastewater infrastructure would primarily be confined to trenching for miscellaneous utility lines and connections to public infrastructure. Installation of wastewater infrastructure will be limited to on-site wastewater distribution and minor off-site work associated with connections to the public main. No upgrades to the public main are anticipated. Any work that may affect services to the existing sewer lines will be coordinated with the City of Los Angeles. Furthermore, a Construction Management Plan, which would ensure safe pedestrian access as well as emergency vehicle access and safe vehicle travel in general, will be implemented to reduce any temporary pedestrian and traffic impacts occurring as a result of construction activities. Moreover, when considering impacts resulting from the installation of any required wastewater infrastructure, all impacts are of a relatively short-term duration and would cease to occur once the installation is complete. Therefore, Project impacts on wastewater associated with construction activities would be less than significant.

6.1.3 ENERGY

Electricity provided by LADWP will be utilized during the construction process for various purposes. Demands will include indoor and outdoor lighting and machinery and equipment charging and operation. All demands will be supplied by existing electrical infrastructure and will not have any adverse impact on electrical supply for the area.

Natural gas will not be utilized during construction.

All improvements to energy infrastructure will comply with applicable local, regional, and state requirements and regulations, including City of Los Angeles, LADWP, and SoCalGas. Adherence to these requirements will ensure that any potential impacts are mitigated or reduced. Therefore, construction will not have an adverse impact on either electricity or natural gas infrastructure.

6.2 OPERATION

6.2.1 WATER

6.2.1.1 WATER CONSUMPTION

Based on the Project's proposed land uses, the Project's estimated water consumption is approximately 42,741 gallons per day (gpd), resulting in a net increased water demand of approximately 25,941 gpd. These demand numbers were calculated using 100 percent of the BOS corresponding wastewater generation factors.

Table 5 – Estimated Proposed Water Demand

Land Use	Units	Avg. Generation Factor (gpd/unit)[1]	Total Water Demand (gpd)
Senior Independent Units	71 units	110 gpd/unit	7,810
Assisted Living Guest Rooms	75 units	110 gpd/unit	8,250
Memory Care Guest Rooms	46 units	110 gpd/unit	5,060
Indoor Common Areas	50,463 SF	50 gpd/1,000 SF	2,523
Outdoor Common Areas	14,630 SF	50 gpd/1,000 SF	732
Indoor Swimming Pool	1 unit	16,458 gpd/unit	16,458
Indoor Spa	1 unit	1,908 gpd/unit	1,908
Total Proposed Water Demand			**42,741**
Total Existing Water Demand			**16,800**
Project Net Water Demand (Proposed – Existing)			**+25,941**

Notes
[1] Based on 100% of the BOS sewer generation factors and correspondence from BOS to Department of City Planning regarding the projected wastewater discharges for the proposed Project dated July 11, 2019 (see Attachment D).

6.2.1.2 WATER INFRASTRUCTURE ASSESSMENT

The current 4-inch water main needs to be upgraded in order to serve the proposed development with adequate water supply as noted in the SAR (see Attachment A). Therefore, the Project will require removal and upsizing of the existing water lines that serve the Project Site, and construction of new on-site water distribution lines to serve the new building. This is due to both the proposed realignment of Bellwood Avenue which currently bifurcates the north and south portions of the Project Site and the insufficient capacity within the existing 4-inch water main to convey the proposed increased water demand.

To ensure adequate water conveyance capacity is provided for the Project, the current 4-inch water line would be upgraded. As referenced in the Information on Fire Flow Availability Report (IFFAR) in Attachment A, the existing 4-inch line would be abandoned and replaced with approximately 250 feet of new 8-inch line to be installed in the easterly drive aisle of Bellwood Avenue and approximately 213 feet of new 8-inch main extensions to be installed in the westerly drive aisle of Bellwood Avenue. These two new 8-inch lines would tie into the existing 12-inch

main in Olympic Boulevard. Please see Attachment B for an exhibit showing these improvements. These upgrades were identified by LADWP as part of the SAR and IFFAR process (Attachment A) in order to serve the proposed domestic water demand and to meet fire flow requirements as discussed below.

A Will Serve Letter and Service Map was received from LADWP on 02.13.2019, which confirmed the availability of water service for the project (see Attachment C).

6.2.1.3 FIRE FLOW REQUIREMENTS

Per Los Angeles Fire Department requirements, and as indicated by the Los Angeles Fire Department, the Project would be considered to be within the commercial category for fire flow purposes and therefore would require 6,000 gpm to 9,000 gpm from four to six adjacent fire hydrants flowing simultaneously (per Chapter V Article 7 of the City of Los Angeles Municipal Code)[2]. An IFFAR was received for the two (2) existing fire hydrants currently serving the Project Site, as well as two additional proposed private hydrants (see Attachment A). One proposed private hydrant would be located within the private drive aisle fronting the building, and the second would be placed behind the building.

As shown in the IFFAR, the two existing hydrants currently provide 1,500 gpm each and the proposed private hydrants would also provide a minimum of 1,500 gpm each. Therefore, the four (4) hydrants surrounding the site would meet the minimum fire flow requirement of 6,000 gpm. The taps into the new 8-inch water lines discussed above that would be installed as part of the Project would be 6 inches for the proposed hydrants. The minimum requirement of 6,000 gpm for the hydrants was used to determine the upsizing of the existing 4-inch line, discussed above. The upgraded water system surrounding the Project Site would be capable of providing 8,000 gpm of flow. An analysis was run by LADWP at the end of each of the new proposed 8-inch lines for the installation of 8-inch fire service meters, and the proposed upgrades were deemed adequate to provide the necessary fire service to the site.

6.2.2 WASTEWATER

6.2.2.1 SEWER GENERATION

In accordance with the LA CEQA Thresholds Guide, the Project's estimated sewer flows were based on the BOS's sewage generation factors for residential categories as well the WWSI, which is included in Attachment D. Based on the proposed uses and generation factors, the Project's projected wastewater generation is approximately 42,741 gpd, representing a net increase in wastewater generation at the Project Site of approximately 25,941 gpd. A breakdown of these wastewater generation calculations is provided in Table 6.

[2] Counter meeting with Fire Inspector II, Robert Duff, on January 22, 2019.

Table 6 – Estimated Proposed Wastewater Generation

Land Use	Units	Avg. Generation Factor (gpd/unit)[1]	Total Wastewater Generation (gpd)
Senior Independent Units	71 units	110 gpd/unit	7,810
Assisted Living Guest Rooms	75 units	110 gpd/unit	8,250
Memory Care Guest Rooms	46 units	110 gpd/unit	5,060
Indoor Common Areas	50,463 SF	50 gpd/1,000 SF	2,523
Outdoor Common Areas	14,630 SF	50 GPD/1,000 SF	732
Indoor Swimming Pool	1 unit	16,458 gpd/unit	16,458
Indoor Spa	1 unit	1,908 gpd/unit	1,908
Total Proposed Wastewater Flow			**42,741**
Total Existing Wastewater Flow			**16,800**
Project Net Wastewater Flow (Proposed – Existing)			**+25,941**

Notes
[1] Based on 100% of the BOS sewer generation factors and correspondence from BOS to Department of City Planning regarding the projected wastewater discharges for the proposed Project dated July 11, 2019 (see Attachment D).

As mentioned, the WWSI estimates wastewater generation to be approximately 42,741 gpd which is summarized in Table 6. This represents an increase in flows from existing conditions by approximately 25,941 gpd. As noted in the WWSI, it is anticipated that adequate capacity exists in the sewer infrastructure surrounding the project. Further detailed gauging and evaluation, as required by Municipal Code Section 64.14, would be conducted to obtain final approval of sewer capacity and connection permit for the Project during the Project's permitting process.

6.2.2.2 INFRASTRUCTURE CAPACITY

The sewer main in Bellwood Avenue or Kerwood Avenue will serve the Project, and sewage from the Project Site is conveyed to the City's Hyperion Treatment Plant. The BOS's most current IRP notes that the existing design capacity of the Hyperion Service Area is approximately 550 mgd (consisting of 450 mgd at the Hyperion Treatment Plant, 80 mgd at the Donald C. Tillman Water Reclamation Plant, and 20 mgd at the Los Angeles-Glendale Water Reclamation Plant), and that the existing average daily flow for the system as of 2017 is approximately 300 mgd.

The Project's estimated wastewater generation increase of 25,941 gpd or 0.03 mgd comprises less than 0.01 percent of the available capacity in the system and is within the system's capacity of 250 mgd and is therefore within the remaining capacity. Therefore, based on the WWSI prepared for the Project and the available wastewater treatment capacity, impacts on wastewater infrastructure would be less than significant.

6.2.3 ENERGY

6.2.3.1 ELECTRICITY

The Project Site would continue to be served by the existing electrical line that runs along Olympic Boulevard. Operation of the Project under proposed buildout conditions is anticipated to increase electricity demands by approximately 884,887 kWh per year.

The estimated proposed electricity demand under buildout conditions for the Project is summarized in Table 7 below.

Table 7 – Estimated Proposed Electricity Demand

Land Use	Units	Total Avg. (kWh/year)[1,2]
Eldercare Facility	192 units	1,568,782
Total Proposed Electricity Demand		**1,568,782**
Total Existing Electricity Demand		**683,895**
Project Net Electricity Demand (Proposed – Existing)		**884,887**

Notes
[1] CalEEmod was used to calculate the electricity demand based on land use.
[2] Kilowatt hours (kWh)
Source: Eyestone Environmental, 2020. See Energy Appendix in the Project Draft EIR.

A Will Serve Letter was received from LADWP on 10.18.2018, which confirmed the availability of electric service for the project. (See Attachment E). The letter noted that the estimated increase in power requirement under buildout conditions was part of the total load growth forecast for the City and was taken into account with the planned growth of the power system. Based on the letter received by LADWP, impacts to electricity associated with operations of the proposed Project would be less than significant.

6.2.3.2 NATURAL GAS

The Project Site would continue to be served by the existing 3-inch gas line on Bellwood Avenue. Natural gas usage is projected to increase by 462,208 cf per year under proposed buildout conditions.

The estimated proposed natural gas demand under buildout conditions for the Project is provided in Table 8 below.

Table 8 – Estimated Proposed Natural Gas Demand

Land Use	Units	Total Average Demand (cf/year)[1,2]
Eldercare Facility	192 units	2,409,465
Total Proposed Natural Gas Demand		**2,409,465**
Total Existing Natural Gas Demand		**1,947,257**
Project Net Natural Gas Demand (Proposed – Existing)		**462,208**

Notes
[1] CalEEmod was used to calculate the natural gas demand based on land use.
[2] Cubic feet (cf)
Source: Eyestone Environmental, 2020. See Energy Appendix in the Project Draft EIR.

A Will Serve Letter was received from Southern California Gas Company on 02.01.2019 confirming the availability of natural gas service for the Project. (See Attachment F).

7. CUMULATIVE IMPACTS

7.1 WATER

As mentioned above, the Project will include the upsizing of the 4-inch water line that serves the Project Site to provide adequate conveyance of water supply for domestic use and fire flows. In addition, the Project will include the appropriate amount of new fire hydrants to meet the requirements of the Municipal Code to provide 6,000 gpm to 9,000 gpm from four to six adjacent fire hydrants flowing simultaneously. Therefore, sufficient water infrastructure and fire protection will be provided for the Project and no significant impacts are anticipated.

With regard to potential cumulative impacts on water supply within the LADWP service area that serves the Project, LADWP, as a public water service provider, is required to prepare and periodically update an Urban Water Management Plan (UWMP) to plan and provide for water supplies to serve existing and projected demands. The 2015 UWMP prepared by LADWP accounts for existing development within the City, as well as projected growth through the year 2040. Average demands from 2011-2014 in the LADWP service area are approximately 566,990 acre-feet per year (AFY). Demands within the LADWP service area are anticipated to increase to 675,700 AFY to 709,500 AFY in 2040 depending on climate scenarios (i.e. average years versus drought years). This yields an anticipated increase in demands of 108,710 AFY to 142,510 AFY. The increase in water demands of 25,941 gpd or 29.0 AFY from the proposed Project is well within the planned increases in water demands within the LADWP service area. Based on the above, it is anticipated that LADWP would be able to supply the demands of the Project and future growth. Therefore, cumulative impacts on water supply would be less than significant.

7.2 WASTEWATER

The Project will result in the additional generation of sewer flow. However, as discussed above, the BOS has conducted quantified Project wastewater flows and anticipates adequate capacity exists to serve the Project. Related projects connecting to the same sewer system are required to obtain a sewer connection permit and submit a sewer capacity availability request to the BOS as part of the related project's development review. If system upgrades are required as a result of a given project's additional flow, arrangements would be made between the related project and the BOS to construct the necessary improvements. Impact determination will be provided following the completion of the SCAR analysis.

Wastewater generated by the Project would be conveyed via the existing wastewater conveyance systems for treatment at the Hyperion Treatment Plant system. As previously stated, based on information from the BOS, the existing design capacity of the Hyperion Service Area is approximately 550 million gallons per day (mgd) and the existing average daily flow for the system is approximately 300 mgd. The Project's total estimated wastewater generation increase of 25,941 gpd summarized in Table 6 comprises less than 0.01 percent of the available capacity in the system (250 mgd) and approximately 0.5 percent of the 5 mgd annual allotment of wastewater flow increase for the Hyperion Treatment Plant per Ordinance No. 166060. It is expected that related projects would also be required to adhere to the Bureau of Sanitation's annual wastewater flow increase allotment.

Based on these forecasts, the Project's increase in wastewater generation would be adequately accommodated by the Hyperion Service Area. In addition, the BOS's analysis confirms that the Hyperion Treatment Plant has sufficient capacity and regulatory allotment for the proposed Project. Thus, operation of the Project would have a less than significant impact on wastewater treatment facilities. Related projects must go through the same analysis to determine if any facilities will need to be upgraded to accommodate for the increase in capacity. Therefore, cumulative impacts would be less than significant.

7.3 ENERGY

The geographic context for the cumulative analysis of electricity is LADWP's service area and the geographic context for the cumulative analysis of natural gas is SoCalGas' service area.

The Project will result in additional electricity demand. As noted above, LADWP has indicated through a will-serve letter dated 10.18.2018 (see Attachment E) that the increase in electrical demands created by the Project are within its planning thresholds and that they will not create an adverse impact on its infrastructure serving the Project Site. Electricity will be delivered through the same infrastructure under buildout conditions as existing conditions.

Natural gas demand is also anticipated to increase as a result of implementation of the proposed Project. The Project will utilize the same 3-inch line on Bellwood Ave that is used under existing conditions. Buildout of the Project is expected to increase natural gas consumption during operation and cumulatively increase the need for natural gas supplies and infrastructure capacity. As stated above, the Project's estimated net increase in demand for natural gas is 462,208 cf per year, or approximately 1,266 cf per day. Based on the 2018 California Gas Report, the California Energy and Electric Utilities estimates natural gas

consumption within SoCalGas' planning area will be approximately 2.49 billion cf/day in 2023 (the Project's buildout year).[3] The Project would account for approximately 0.00005 percent of the 2023 forecasted consumption in SoCalGas' planning area.. Therefore, cumulative impacts regarding natural gas capacity would be less than significant.

8. LEVEL OF SIGNIFICANCE

Based on the analysis provided in this report, Project impacts related to water, wastewater, electricity and natural gas would be less than significant.

[3] California Gas and Electric Utilities, 2018 California Gas Report, p. 100.

ATTACHMENT A

ATTACHMENT A – CITY OF LOS ANGELES, LADWP, WATER PRESSURE – FLOW REPORT (SAR) AND INFORMATION ON FIRE FLOW AVAILABILITY (IFFAR)

City of Los Angeles

Los Angeles Department of Water and Power - Water System

SAR NUMBER **73170**

Fire Service Pressure Flow Report

SERVICE NUMBER **629665**

For: **10330 BELLWOOD AVE**

Approved Date: **12-14-2018**

Proposed Service **6 INCH** off of the

4 inch main in **BELLWOOD AV** on the **EAST** side approximately

200 feet **SOUTH** of **SOUTH** of **OLYMPIC BL** The System maximum pressure is

89 psi based on street curb elevation of **222** feet above sea level at this location.

The distance from the DWP street main to the property line is **17** feet

System maximum pressure should be used only for determining class of piping and fittings.

NOT APPROVED

Residual Flow/Pressure Table for water system street main at this location

Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)
0	78	590	60	855	42
125	77	605	59	870	41
180	76	625	58	880	40
225	75	640	57	895	39
260	74	655	56	905	38
295	73	670	55	920	37
325	72	690	54	930	36
355	71	705	53	940	35
380	70	720	52	955	34
405	69	735	51	965	33
430	68	745	50	975	32
450	67	760	49	990	31
475	66	775	48	1000	30
495	65	790	47		
515	64	805	46		
535	63	815	45		
555	62	830	44		
570	61	845	43		

These values are subject to change due to changes in system facilities or demands.

Meter Assembly Capacities

Domestic Meters	
1 inch =	56 gpm
1-1/2 inch =	96 gpm
2 inch =	160 gpm
3 inch =	220 gpm
4 inch =	400 gpm
6 inch =	700 gpm
8 inch =	1500 gpm
10 inch =	2500 gpm

Fire Service	
2 inch =	250 gpm
4 inch =	600 gpm
6 inch =	1400 gpm
8 inch =	2500 gpm
10 inch =	5000 gpm

FM Services	
8 inch =	2500 gpm
10 inch =	5000 gpm

Notes: The maximum available flow is 1000 gpm. Existing 4" main line needs to be upgraded in order to provide requested flow rate.

This information will be sent to the Department of Building and Safety for plan checking.

This SAR is valid for one year from 12-14-18. Once the SAR expires, the applicant needs to re-apply and pay applicable processing fee.

For additional information contact the Water Distribution Services Section **WESTERN (213) 367-1225**

ELIA SUN	ELIA SUN	130-159
Prepared by	**Approved by**	**Water Service Map**

City of Los Angeles
Los Angeles Department of Water and Power - Water System

INFORMATION OF FIRE FLOW AVAILABILITY

Water Service Map No.: 130-159

LAFD Fire Flow Requirement: 6000 to 9000

LAFD Signature: R Duff

Date Signed: 1-22-19

Applicant: MARTIN MONASTERIO

Company Name: FUSCOE ENGINEERING

Address: 600 WILSHIRE BLVD SUITE 1470, LOS ANGELES, CA 90017

Telephone: (213) 988-8802

Email Address: MMONASTERIO@FUSCOE.COM

10330 BELLWOOD AVENUE
LOS ANGELES, CA

	F- 31208 MP	F- 43262 MP	F-
Location:	SW BELLWOOD AVE (WEST) & OLYMPIC BLVD	SW OLYMPIC BLVD & BELLWOOD AVE (EAST)	
Distance from Neareast Pipe Location (feet):	17'	19'	
Hydrant Size:	2½" x 4"	4"D	
Water Main Size (in):	(PROPOSED) 8" D.I.	(EXISTING) 6" C.I.	
Static Pressure (psi):	91 Max	89 Max	
Residual Pressure (psi):	79	78	
Flow at 20 psi (gpm):	1500	1500	

NOTE: Data obtained from hydraulic analysis using peak hour.

Remarks: * COMBINED FLOW FROM (F-43262 & F-31208 & 8" F.S. 630048 & 8" F.S. 630047)

ECMR No. W20190129028

PLEASE INCLUDE ALL WATER MAIN UPSIZING REQUIRED
2 PUBLIC HYDRANTS (F-43262 AND F-31208)
2 PRIVATE HYDRANTS FROM (2) 8" FS (S#630048 & S#630047)
* REQUIRES 213'-8" DI. INS. BELLWOOD AVE (WEST) & 250'-8" D.I. INS. BELLWOOD (EAST) TO GET COMBINED FLOW

Water Purveyor: **Los Angeles Department of Water & Power** *Date:* 2/1/2019

Signtature: Mark Patterson *Title:* CIVIL ENGINEERING ASSOCIATE

Requests must be made by submitting this completed application, along with a $230.00 check payable to:
"Los Angeles Department of Water and Power", and mailed to:

CYNTHIA TAYLOR
JAN 29 2019

Los Angeles Department of Water and Power
Distribution Engineering Section - Water
Attn: Business Arrangements
P.O. Box 51111 - Room 1425
Los Angeles, CA 90051-5700

RECEIVED/WDE
JAN 29 2019

*** If you have any questions, please contact us at (213) 367-2130 or visit our web site at http://www.ladwp.com.**

City of Los Angeles

Los Angeles Department of Water and Power - Water System

SAR NUMBER **74207**

Fire Service Pressure Flow Report

SERVICE NUMBER **630047**

For: **10330 BELLWOOD AVE** Approved Date: **2-1-2019**

Proposed Service **8 INCH** off of the

8 inch main in **BELLWOOD AV** on the **EAST** side approximately

150 feet **SOUTH** of **SOUTH** of **OLYMPIC BL** The System maximum pressure is

91 psi based on street curb elevation of **216** feet above sea level at this location.

The distance from the DWP street main to the property line is **17** feet

System maximum pressure should be used only for determining class of piping and fittings.

Residual Flow/Pressure Table for water system street main at this location

Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)
0	79	1470	61	2140	43
310	78	1515	60	2170	42
450	77	1560	59	2205	41
560	76	1600	58	2235	40
655	75	1640	57	2265	39
735	74	1680	56	2295	38
815	73	1720	55	2325	37
885	72	1760	54	2355	36
950	71	1795	53	2385	35
1010	70	1830	52	2415	34
1070	69	1870	51	2445	33
1130	68	1905	50	2470	32
1185	67	1940	49	2500	31
1235	66	1975	48		
1285	65	2010	47		
1335	64	2040	46		
1380	63	2075	45		
1425	62	2110	44		

These values are subject to change due to changes in system facilities or demands.

Meter Assembly Capacities

Domestic Meters	
1 inch =	56 gpm
1-1/2 inch =	96 gpm
2 inch =	160 gpm
3 inch =	220 gpm
4 inch =	400 gpm
6 inch =	700 gpm
8 inch =	1500 gpm
10 inch =	2500 gpm

Fire Service	
2 inch =	250 gpm
4 inch =	600 gpm
6 inch =	1400 gpm
8 inch =	2500 gpm
10 inch =	5000 gpm

FM Services	
8 inch =	2500 gpm
10 inch =	5000 gpm

Notes: Fire Service Only. Simultaneous flow with 1500 gpm from F-31208, 1500 gpm from F-43262 & 2500 gpm from 8"FS 630048. Requires 463' - 8" DI water main upsizing.

This information will be sent to the Department of Building and Safety for plan checking.

This SAR is valid for one year from 02-01-19. Once the SAR expires, the applicant needs to re-apply and pay applicable processing fee.

For additional information contact the Water Distribution Services Section **WESTERN (213) 367-1225**

MARK PATTERSON	MARK PATTERSON	130-159
Prepared by	**Approved by**	**Water Service Map**

City of Los Angeles

Los Angeles Department of Water and Power - Water System

SAR NUMBER **74208**

Fire Service Pressure Flow Report

SERVICE NUMBER **630048**

For: **10330 BELLWOOD AVE** Approved Date: **2-1-2019**

Proposed Service **8 INCH** off of the

4 inch main in **BELLWOOD AV** on the **WEST** side approximately

150 feet **SOUTH** of **SOUTH** of **OLYMPIC BL** The System maximum pressure is

88 psi based on street curb elevation of **224** feet above sea level at this location.

The distance from the DWP street main to the property line is **17** feet

System maximum pressure should be used only for determining class of piping and fittings.

Residual Flow/Pressure Table for water system street main at this location

Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)
0	76	1605	58	2330	40
335	75	1650	57	2365	39
490	74	1695	56	2400	38
610	73	1740	55	2435	37
710	72	1785	54	2465	36
805	71	1830	53	2500	35
885	70	1870	52		
960	69	1915	51		
1035	68	1955	50		
1100	67	1995	49		
1165	66	2035	48		
1230	65	2075	47		
1290	64	2110	46		
1345	63	2150	45		
1400	62	2185	44		
1455	61	2225	43		
1505	60	2260	42		
1555	59	2295	41		

These values are subject to change due to changes in system facilities or demands.

Meter Assembly Capacities

Domestic Meters	
1 inch =	56 gpm
1-1/2 inch =	96 gpm
2 inch =	160 gpm
3 inch =	220 gpm
4 inch =	400 gpm
6 inch =	700 gpm
8 inch =	1500 gpm
10 inch =	2500 gpm

Fire Service	
2 inch =	250 gpm
4 inch =	600 gpm
6 inch =	1400 gpm
8 inch =	2500 gpm
10 inch =	5000 gpm

FM Services	
8 inch =	2500 gpm
10 inch =	5000 gpm

Notes: Fire Service Only. Simultaneous flow with 1500 gpm from F-31208, 1500 gpm from F-43262 & 2500 gpm from 8"FS 630047. Requires 463' - 8" DI water main upsizing.

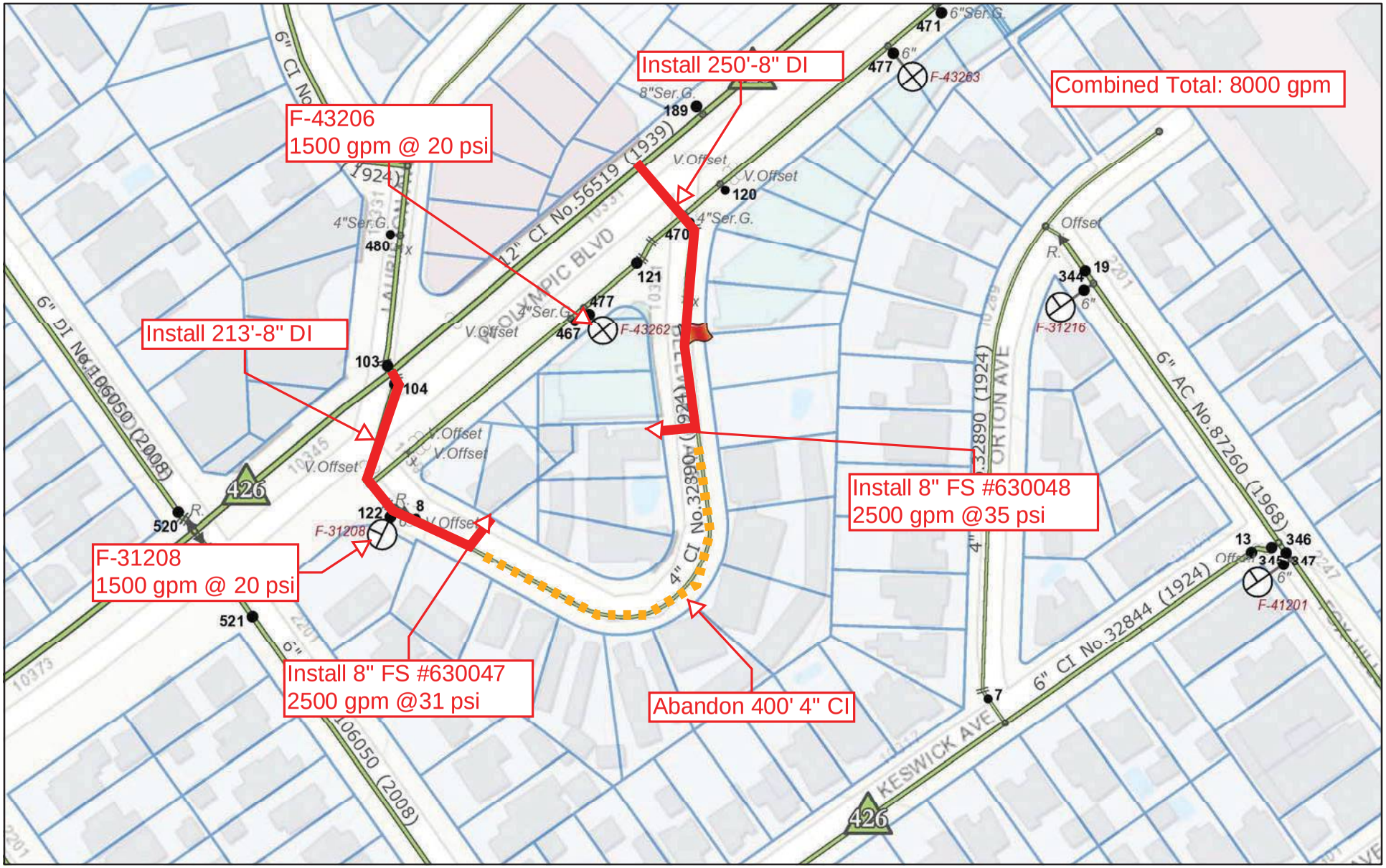
This information will be sent to the Department of Building and Safety for plan checking.

This SAR is valid for one year from 02-01-19. Once the SAR expires, the applicant needs to re-apply and pay applicable processing fee.

For additional information contact the Water Distribution Services Sectior**WESTERN (213) 367-1225**

MARK PATTERSON	MARK PATTERSON	130-159
Prepared by	**Approved by**	**Water Service Map**

10330 Bellwood Ave NavLADWP



February 1, 2019

1:1,844

0 0.015 0.03 0.06 mi

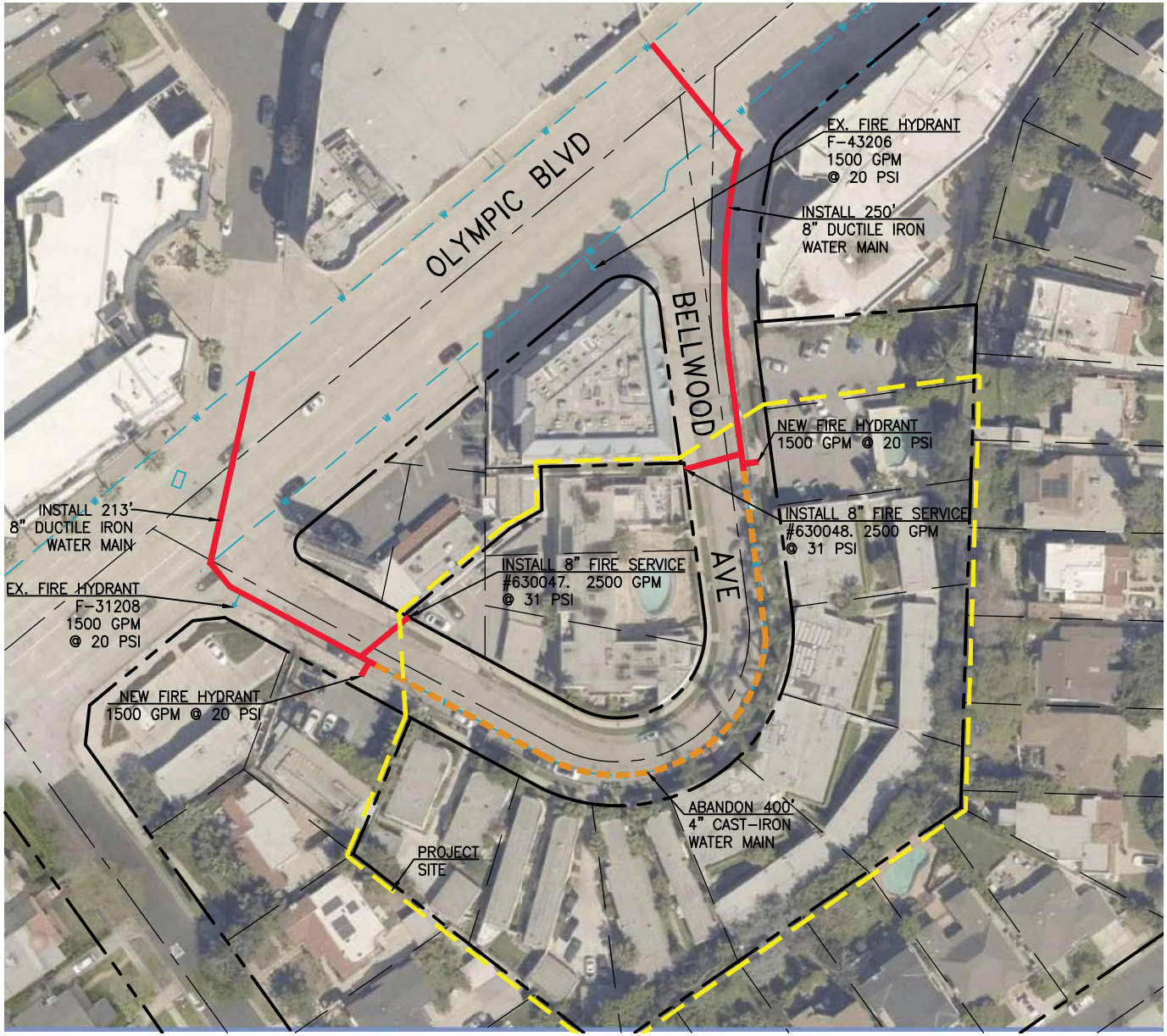
0 0.025 0.05 0.1 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

LADWP
Copyright 2017

ATTACHMENT B

WATER LINE IMPROVEMENTS EXHIBIT



ATTACHMENT B - BELLWOOD - WATER INFRASTRUCTURE IMPROVEMENTS

10328-10384 AND 10341-10381 BELLWOOD AVENUE
LOS ANGELES, CALIFORNIA
12-23-2019

60' 0' 30' 60'
SCALE: 1" = 60'

FUSCOE ENGINEERING
full circle thinking
600 WILSHIRE BLVD., STE. 1470, LOS ANGELES, CA 90017
PHONE: 213.988.8802 FAX: 213.988.8803

F:\PROJECTS\1755\001\EXHIBITS\XH1755-001 - BELLWOOD WATER INFRASTRUCTURE.DWG (12-23-19 12:43:41PM) Plotted by: Robert Spagnuolo

ATTACHMENT C

LADWP Water Will Serve Letter

Los Angeles Department of Water & Power

CUSTOMERS FIRST

Eric Garcetti, Mayor

Board of Commissioners
Mel Levine, President
Cynthia McClain-Hill, Vice President
Jill Banks Barad
Christina E. Noonan
Aura Vasquez
Barbara E. Moschos, Secretary

David H. Wright, General Manager

February 13, 2019

Map No. 130-159

Mr. Martin Monasterio
Fuscoe Engineering, Inc.
600 Wilshire Boulevard, Suite 1740
Los Angeles, California 90017

Dear Mr. Monasterio:

Subject: Water Availability – Will Serve
10328-10384, 10341 Bellwood Avenue
APN: 4315-018-029, TR 7260, Block 13, Lot 29
APN: 4315-018-034, TR 7260, Block 13, Lot 37
APN: 4315-018-048, TR 7260, Block 14, Lot 10

This is in reply to your request regarding water availability for the above-mentioned locations. These properties can be supplied with water from the municipal system subject to the Water System rules of the Los Angeles Department of Water and Power (LADWP). It is also subject to all conditions set by LADWP.

Should you require additional information, please contact Amy Kurakusu at (213) 367-4908. Correspondence may be addressed to:

LADWP – Water Business Arrangements
Attention: Amy Kurakusu
P.O. Box 51111, Room 1425
Los Angeles, California 90051-5700

Sincerely,

Liz Gonzalez
Manager – Business Arrangements
Water Distribution Engineering

AK:rp
c: Amy Kurakusu

132-159

651-031

261-031

N.1,840,241

128-159

The Los Angeles Department of Water and Power (LADWP) assumes no responsibility for the accuracy of the substructure information herein provided. The user assumes responsibility for verifying substructure locations before excavation and assumes all liabilities for damage to LADWP facilities as a result of such excavation. Call Underground Service alert on 1-800-227-2600 two (2) days before excavating.

LEGEND MAP SCALE 1" = 1500'	SYMBOLS AND NOTATIONS	SCALE: 1" = 100'	PLOTTED	DATE	CHK'D.	DATE	FIRE HYDRANTS	REFERENCES	
	AS SHOWN	GIS MAP IN SERVICE	NAME	xx-xx-xxxx	NAME	xx-xx-xxxx	2 1/2" SINGLE	MAPS REPLACED: 811 NS, 810 NS; 812 NS, 813 NS	GATE BK: 133-157, 133-162
		CONVERTED MAINS	A.GARCIA	04-07-2003	C.V.BEAS	06-09-2005	2 1/2" S. BUILT UP		
		CONVERTED SERVICES	J.LU	03-06-2006	NAME	xx-xx-xxxx	2 1/2" DOUBLE		
		MISC	NAME	xx-xx-xxxx	NAME	xx-xx-xxxx	4" SINGLE	LARIAC AERIAL:	LANDBASE: 129b157, 129b161
							4" S. BUILT UP		
							4" DOUBLE	DATUM	NAD 1983, ZONE V; LEVELS: U.S.G.S
		APPROVED					2 1/2" x 4" DOUBLE		

WATER GEOGRAPHIC INFORMATION SYSTEMS & GRAPHICS GROUP
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

WATER SERVICE MAP

SERVICE ZONE ELEVATION 426 | 130-159 | WESTERN

130-159

10/1/2018 8:04:17 AM, btnnh

WaterGIS

Questions or Comments, contact: Water GIS Group, Room 1439, JFB

ATTACHMENT D

REQUEST FOR WASTEWATER SERVICE INFORMATION (WWSI)

FORM GEN. 160 (Rev. 8-12)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

DATE: July 11, 2019

TO: Vincent P. Bertoni, Director of Planning
Department of City Planning

Attn: Adam Villani, City Planner
Department of City Planning

FROM: Ali Poosti, Division Manager
Wastewater Engineering Services Division
LA Sanitation and Environment

SUBJECT: **SENIOR RESIDENTIAL COMMUNITY AT THE BELLWOOD - NOTICE OF PREPARATION OF ENVIRONMENTAL IMPACT REPORT AND PUBLIC SCOPING MEETING**

This is in response to your June 12, 2019 letter requesting a review of the proposed eldercare facility located at 10328-10384 and 10341-10381 Bellwood Ave, Los Angeles, CA 90064. The project will consist of senior independent units, assisted living and memory care guest rooms, indoor common and outdoor common areas. LA Sanitation has conducted a preliminary evaluation of the potential impacts to the wastewater and stormwater systems for the proposed project.

WASTEWATER REQUIREMENT

LA Sanitation, Wastewater Engineering Services Division (WESD) is charged with the task of evaluating the local sewer conditions and to determine if available wastewater capacity exists for future developments. The evaluation will determine cumulative sewer impacts and guide the planning process for any future sewer improvement projects needed to provide future capacity as the City grows and develops.

Projected Wastewater Discharges for the Proposed Project:

Type Description	Average Daily Flow per Type Description (GPD/UNIT)	Proposed No. of Units	Average Daily Flow (GPD)
Proposed			
Senior Independent Units	110 GPD/ DU	71 DU	7,810
Assisted Living Guest Rooms	110 GPD/ DU	75 DU	8,250
Memory Care Guest Rooms	110 GPD/ DU	46 DU	5,060
Indoor Common Area	50 GPD/1000 SQ.FT	50,463 SQ.FT	2,523
Outdoor Common Area	50 GPD/1000 SQ.FT	14,630 SQ.FT	732
Indoor Swimming Pool	16,458 GAL/UNIT	1 UNIT	16,458
Indoor Spa	1,908 GAL/UNIT	1 UNIT	1,908
Total			**42,741 GPD**

SEWER AVAILABILITY

The sewer infrastructure in the vicinity of the proposed project includes an existing 8-inch line on Bellwood Ave. The sewage from the existing 8-inch line feeds into a 12-inch line on Olympic Blvd. The sewage from the existing 12-inch line feeds into an 18-inch line on Tennessee Ave. The sewage from the existing 18-inch line feeds into a 27-inch line on Tennessee Ave before discharging into a 42-inch sewer line on Manning Ave. Figure 1 shows the details of the sewer system within the vicinity of the project. The current flow levels (d/D) in the 8-inch line, 12-inch line, and 18-inch line cannot be determined at this time without additional gauging.

The current approximate flow level (d/D) and the design capacities at d/D of 50% in the sewer system are as follows:

Pipe Diameter (in)	Pipe Location	Current Gauging d/D (%)	50% Design Capacity
8	Bellwood Ave	*	475,534 GPD
12	Olympic Blvd	*	1.07 MGD
18	Tennessee Ave	*	1.89 MGD
27	Tennessee Ave	30	7.20 MGD
42	Manning Ave	27	20.25 MGD

* No gauging available

Based on the estimated flows, it appears the sewer system might be able to accommodate the total flow for your proposed project. Further detailed gauging and evaluation will be needed as part of the permit process to identify a specific sewer connection point. If the public sewer has insufficient capacity, then the developer will be required to build sewer lines to a point in the sewer system with sufficient capacity. Any sewer ejector shall be reviewed by LASAN staff prior to City of Los Angeles Department of Building and Safety (LADBS) approval. A final approval for sewer capacity and connection permit will be made at that time. Ultimately, this sewage flow will be conveyed to the Hyperion Water Reclamation Plant, which has sufficient capacity for the project.

If you have any questions, please call Christopher DeMonbrun at (323) 342-1567 or email at chris.demonbrun@lacity.org.

STORMWATER REQUIREMENTS

LA Sanitation, Watershed Protection Program (WPP) is charged with the task of ensuring the implementation of the Municipal Stormwater Permit requirements within the City of Los Angeles. We anticipate the following requirements would apply for this project.

POST-CONSTRUCTION MITIGATION REQUIREMENTS

In accordance with the Municipal Separate Storm Sewer (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (Order No. R4-2012-0175, NPDES No. CAS004001) and

the City of Los Angeles Stormwater and Urban Runoff Pollution Control requirements (Chapter VI, Article 4.4, of the Los Angeles Municipal Code), the Project shall comply with all mandatory provisions to the Stormwater Pollution Control Measures for Development Planning (LID Ordinance) and as it may be subsequently amended or modified. Prior to issuance of grading or building permits, the Applicant shall submit a LID Plan to the City of Los Angeles, Bureau of Sanitation, Watershed Protection Division (WPD), for review and approval. The LID Plan shall be prepared consistent with the requirements of the Development Best Management Practices Handbook.

Current regulations prioritize infiltration, capture/use, and then biofiltration as the preferred stormwater control measures. The relevant documents can be found at: www.lacitysan.org. It is advised that input regarding LID requirements be received in the early phases of the project from WPD's plan-checking staff.

GREEN STREETS

The City is developing a Green Street Initiative that will require projects to implement Green Street elements in the parkway areas between the roadway and sidewalk of the public right-of-away to capture and retain stormwater and urban runoff to mitigate the impact of stormwater runoff and other environmental concerns. The goals of the Green Street elements are to improve the water quality of stormwater runoff, recharge local ground water basins, improve air quality, reduce the heat island effect of street pavement, enhance pedestrian use of sidewalks, and encourage alternate means of transportation. The Green Street elements may include infiltration systems, biofiltration swales, and permeable pavements where stormwater can be easily directed from the streets into the parkways and can be implemented in conjunction with the LID requirements. Green Street standard plans can be found at: www.eng2.lacity.org/techdocs/stdplans/

CONSTRUCTION REQUIREMENTS

All construction sites are required to implement a minimum set of BMP's for erosion control, sediment control, non-stormwater management, and waste management. In addition, construction sites with active grading permits are required to prepare and implement a Wet Weather Erosion Control Plan during the rainy season between October 1 and April 15. Additionally, construction sites that disturb more than one-acre of land are subject to the NPDES Construction General Permit issued by the State of California, and are required to prepare, submit, and implement the Storm Water Pollution Prevention Plan (SWPPP).

If there are questions regarding the stormwater requirements, please call WPP's plan-checking counter at (213) 482-7066. WPD's plan-checking counter can also be visited at 201 N. Figueroa, 3rd Fl, Station 18.

GROUNDWATER DEWATERING REUSE OPTIONS

The Los Angeles Department of Water and Power (LADWP) is charged with the task of supplying water and power to the residents and businesses in the City of Los Angeles. One of the sources of water includes groundwater. The majority of groundwater in the City of Los Angeles is adjudicated, and the rights of which are owned and managed by various parties. Extraction of groundwater within the City from any depth by law requires metering and regular reporting to the appropriate Court-appointed Watermaster. LADWP facilitates this reporting process, and may assess and collect associated fees for the usage of the City's water rights. The party performing the dewatering should inform the property owners about the reporting requirement and associated usage fees.

On April 22, 2016 the City of Los Angeles Council passed Ordinance 184248 amending the City of Los Angeles Building Code, requiring developers to consider beneficial reuse of groundwater as a conservation measure and alternative to the common practice of discharging groundwater to the storm drain (SEC. 99.04.305.4). It reads as follows: "Where groundwater is being extracted and discharged, a system for onsite reuse of the groundwater, shall be developed and constructed. Alternatively, the groundwater may be discharged to the sewer."

Groundwater may be beneficially used as landscape irrigation, cooling tower make-up, and construction (dust control, concrete mixing, soil compaction, etc.). Different applications may require various levels of treatment ranging from chemical additives to filtration systems. When onsite reuse is not available the groundwater may be discharged to the sewer system. This allows the water to be potentially reused as recycled water once it has been treated at a water reclamation plant. If groundwater is discharged into the storm drain it offers no potential for reuse. The onsite beneficial reuse of groundwater can reduce or eliminate costs associated with sewer and storm drain permitting and monitoring. Opting for onsite reuse or discharge to the sewer system are the preferred methods for disposing of groundwater.

To help offset costs of water conservation and reuse systems, LADWP offers the Technical Assistance Program (TAP), which provides engineering and technical assistance for qualified projects. Financial incentives are also available. Currently, LADWP provides an incentive of $1.75 for every 1,000 gallons of water saved during the first two years of a five-year conservation project. Conservation projects that last 10 years are eligible to receive the incentive during the first four years. Other water conservation assistance programs may be available from Metropolitan Water District of Southern California. To learn more about available water conservation assistance programs, please contact LADWP Rebate Programs 1-888-376-3314 and LADWP TAP 1-800-544-4498, selection "3".

For more information related to beneficial reuse of groundwater, please contact Greg Reed, Manager of Water Rights and Groundwater Management, at (213)367-2117 or greg.reed@ladwp.com.

SOLID RESOURCE REQUIREMENTS

The City has a standard requirement that applies to all proposed residential developments of four or more units or where the addition of floor areas is 25 percent or more, and all other development projects where the addition of floor area is 30 percent or more. Such developments must set aside a recycling area or room for onsite recycling activities. For more details of this requirement, please contact LA Sanitation Solid Resources Recycling hotline 213-922-8300.

AP/CD: ra

Attachment: Figure 1 - Sewer Map

c: Kosta Kaporis, LASAN
Cyrous Gilani, LASAN
Christopher DeMombrun, LASAN

Wastewater Engineering Services Division
Bureau of Sanitation
City of Los Angeles

Figure 1
SENIOR RESIDENTIAL COMMUNITY AT THE BELLWOOD
Sewer Map

N W E S

0 125 250 500 750 1,000 Feet

Thomas Brother Data reproduced with permission granted by THOMAS BROS MAP

ATTACHMENT E

CITY OF LOS ANGELES, LADWP, POWER WILL SERVE

POWER SYSTEM
ENGINEERING
DIVISION

NEW BUSINESS & CUSTOMER
SUPPORT SUBSECTION

METROPOLITAN SERVICE PLANNING

2633 Artesian Street, Suite 250, Los Angeles CA 90031 (213) 367-6000 *FAX*: (213) 367-6089

Antoine S. Raad
District Engineer

October 18, 2018

Mr. Martin Monasterio
Fuscoe Engineering, Inc.
600 Wilshire Bl, Suite 1470
Los Angeles, CA 90017

Dear Mr. Monasterio:

10330-10380, 10341 Bellwood Av WR# 1862308

This is in response to your letter dated October 17, 2018 regarding electric service for the proposed project at the above address.

Electric service is available and will be provided in accordance with the Department of Water and Power Rules and Regulations. The estimated power requirement for this proposed project is part of the total load growth forecast for the City and has been taken into account in the planned growth of the power system

If you have any questions regarding this matter, please call Mr. Joseph Heitkemper at (213) 367-6230.

Sincerely,

Antoine S. Raad JSH

ANTOINE S. RAAD
District Engineer
Metro West Service Planning

Cc: File
Engr - JJH

ATTACHMENT F

SOUTHERN CALIFORNIA GAS COMPANY, SOCALGAS, GAS WILL SERVE

Southern California Gas Company

A Sempra Energy utility®

February 1, 2019

Attn: Evan Cochran, EIT
Fuscoe Engineering, Inc.
600 Wilshire Blvd.
Los Angeles, CA. 90017

RE: Will Serve Letter Request for – Job ID# 43-2014-09-00074: 10380 Bellwood Ave. Los Angeles, CA. 90064

Dear Sir/Madam:

Thank you for inquiring about the availability of natural gas service for your project. We are pleased to inform you that Southern California Gas Company (SoCalGas) has facilities in the area where the above named project is being proposed. The service would be in accordance with SoCalGas' policies and extension rules on file with the California Public Utilities Commission (Commission) at the time contractual arrangements are made.

This letter should not be considered a contractual commitment to serve the proposed project, and is only provided for informational purposes only. The availability of natural gas service is based upon natural gas supply conditions and is subject to changes in law or regulation. As a public utility, SoCalGas is under the jurisdiction of the Commission and certain federal regulatory agencies, and gas service will be provided in accordance with the rules and regulations in effect at the time service is provided. Natural gas service is also subject to environmental regulations, which could affect the construction of a main or service line extension (for example, if hazardous wastes were encountered in the process of installing the line). Applicable regulations will be determined once a contract with SoCalGas is executed.

If you need assistance choosing the appropriate gas equipment for your project, or would like to discuss the most effective applications of energy efficiency techniques, please contact our area Service Center at 800-427-2200.

Thank you again for choosing clean, reliable, and safe natural gas, your best energy value.

Sincerely,

William Perez

Pipeline Planning Associate

Compton Headquarters