Westview Housing Project

Initial Study – Mitigated Negative Declaration

prepared by

City of Santa Ana
Planning and Building Agency
20 Civic Center Plaza, Ross Annex M-20
Santa Ana, California 92702
Contact: Selena Kelaher, AICP

prepared with the assistance of

Rincon Consultants, Inc.
250 East 1st Street, Suite 1400
Los Angeles, California 90012

November 2020

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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Initial Study

1. Project Title

Westview Housing Project

2. Lead Agency Name and Address

City of Santa Ana
Planning and Building Agency
20 Civic Center Plaza
Ross Annex M-20
Santa Ana, California 92702

3. Contact Person and Phone Number

Selena Kelaher, AICP
(714) 667-2740

5. Project Sponsor's Name and Address

Community Development Partners
3416 Via Oporto, Suite 301
Newport Beach, California 92663

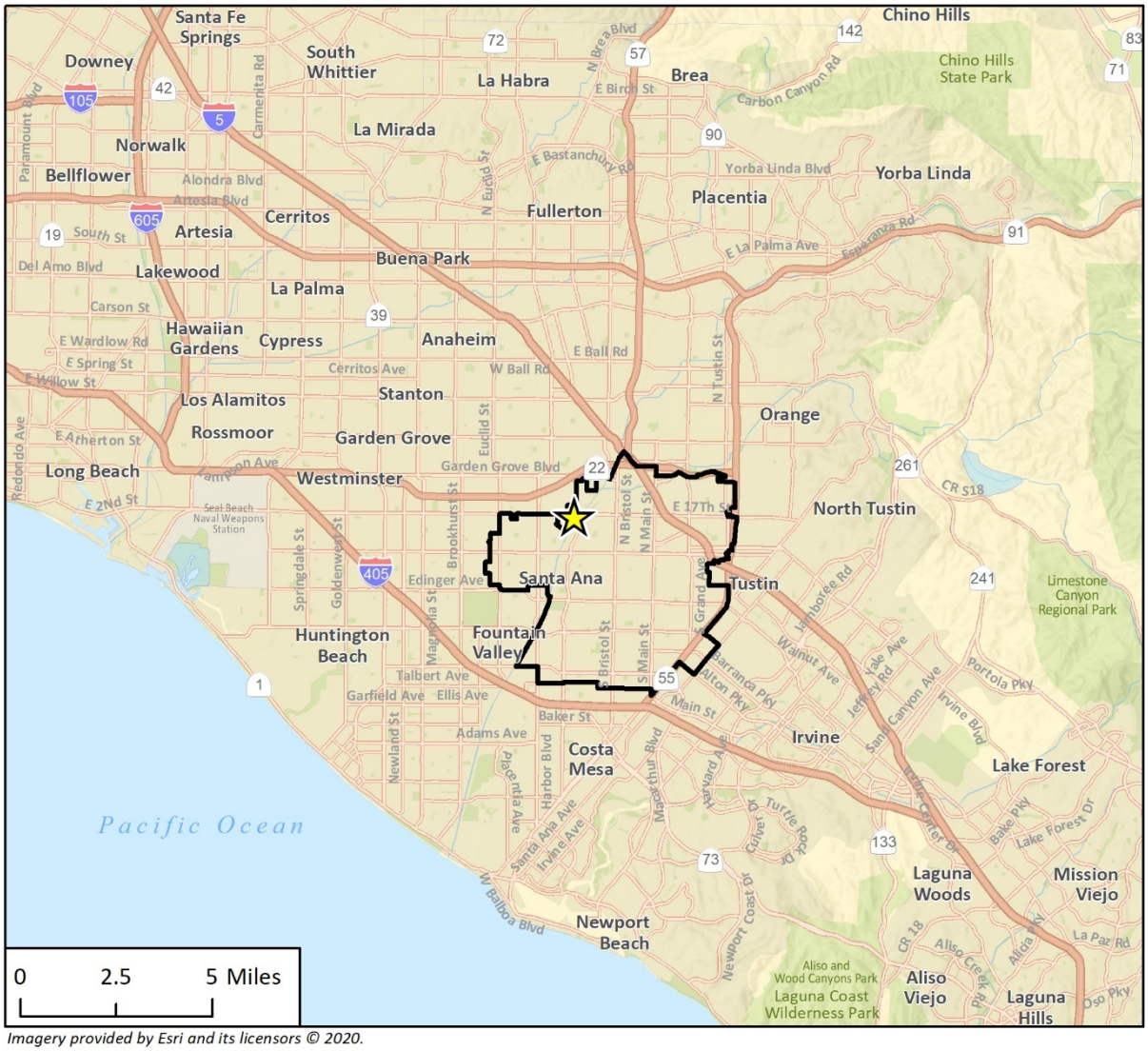
4. Project Location

The project site is located at 2530 and 2534 Westminster Avenue in the City of Santa Ana (hereafter referred to as "City" or "Santa Ana"), California. The site encompasses 92,400 square feet (sf), or approximately 2.1 acres, and consists of two adjoining parcels, which are identified as Assessor Parcel Numbers 198-132-21 and -23. The site is bordered by Westminster Avenue to the north, commercial/retail uses to the east, single-family residences to the south, and North Huron Drive and single-family residences to the west. The site is regionally accessible from State Route 22 (SR-22) and Interstate 5 (I-5) and locally from Westminster Avenue and North Fairview Street. Figure 1 shows the location of the project site in the region and Figure 2 shows the site in its neighborhood context.

5. Existing Setting

The project site is currently an unoccupied, "L-shaped" vacant lot that had historically been developed with commercial/retail uses and parking areas that have since been demolished. There are no on-site operations. As shown on the aerial view in Figure 2 and site photographs in Figure 3, the site predominately consists of vegetation, including three mature trees, with some asphalt paving, a billboard and concrete foundations on the eastern side of the site.

Figure 1 Regional Location



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Project Location

Santa Ana City Limits

N

Figure 2 Project Location

Imagery provided by Microsoft Bing and its licensors © 2020.

Figure 3 Site Photographs

View of project site from the southwestern portion of the site, showing on-site vegetation, paved areas, and mature trees.

View of project site from the northwestern portion of the site showing on-site vegetation, including mature palm tree.

6. General Plan Designation

Current – General Commercial (GC); Proposed – Urban Neighborhood (UN)

7. Zoning

Current – Commercial General (C2); Proposed – Specific Development No. 97 (SD-97)

8. Description of Project

The Westview Housing Project (hereafter referred to as "proposed project" or "project") involves construction of 85 apartment units within two 3- to 4-story buildings (i.e., Building A and Building B) with a maximum height of approximately 45 feet on a 2.1-acre project site. Building A would be situated on the northwestern corner of the site and Building B would be situated on the northeastern corner and center portion of the site. The 85 apartment units would consist of 23 one-bedroom units, 4 two-bedroom units (including a manager's unit), 34 three-bedroom units, and 24 four-bedroom units. All units, except the manager's unit, would be designated as affordable housing units. The project would consist of 98,169 sf in total building area. The project would also provide 136 parking spaces on a surface lot, consisting of 90 standard spaces, 42 tandem spaces, and 4 Americans with Disabilities Act (ADA) accessible spaces. Vehicular access to the project site and parking lot would be provided via an egress/ingress driveway located along Westminster Avenue. The project would provide 40 bicycle parking spaces for residents within an on-site bicycle room and bicycle racks for guests at the project entrance for up to four bicycles. In addition, the project would provide 10,655 sf of common outdoor area (i.e., courtyard, decks, roof decks, picnic area, and playground area) and 4,725 sf of balcony space for a total of 15,380 sf of open space. Table 1 provides a summary of the project, and Figure 4 and Figure 5 show the proposed site and landscape plans, respectively, for the project. In addition, Figure 6 and Figure 7 show the project's elevations from different perspectives.

Green Building Features

The project would meet California's Green Building Standards Code (CALGreen; California Code of Regulations, Title 24, Part 11) and include water and energy efficiency features. The project's water consumption would be minimized through the use of low-flow plumbing fixtures, centralized laundry facilities with water-conserving appliances, and use of drought-tolerant native and adaptive plants as part of the landscape design. Furthermore, the project would include rooftop and ENERGY-star appliances and use of natural light for building interiors to support energy efficiency. Of the 136 parking spaces, an estimated seven spaces would be equipped with electric vehicle (EV) charging stations, with additional infrastructure to expand stations for increased demand in the future.

Construction

Construction of the project is anticipated to occur over a 22-month period from June 2021 to April 2023. Construction phasing would include site preparation, grading, building construction, asphalt paving, and architectural coating. Grading of the project would involve 1,100 cubic yards (cy) of cut soil and 1,900 cy of fill soil. Therefore, the project would import 800 cy of soil to use as fill in conjunction with the cut soil. Construction would occur Monday through Friday between 7:00 AM and 3:00 PM.

Table 1 Project Summary

Site Summary	
Lot Area	92,400 sf (2.1 acres)
Project	
Residential	75,367 sf
Amenities	4,401 sf
Common	18,401 sf
Total	**98,169 sf**
Residential Units	
1-Bedroom Units	23 units
2-Bedroom Units	4 units[1]
3-Bedroom Units	34 units
4-Bedroom Units	24 units
Total	**85 units**
Vehicle Parking Spaces	
Standard	90 spaces
Open Tandem	42 spaces
ADA Accessible	4 spaces
Total	**136 spaces**
Bicycle Parking Spaces	
Residents	40 spaces
Guests	4 spaces
Total	**44 spaces**
Open Space	
Outdoor Area	10,655 sf
Balconies	4,725 sf
Total	**15,380 sf**

[1] Includes one manager's unit.

Figure 4 Site Plan

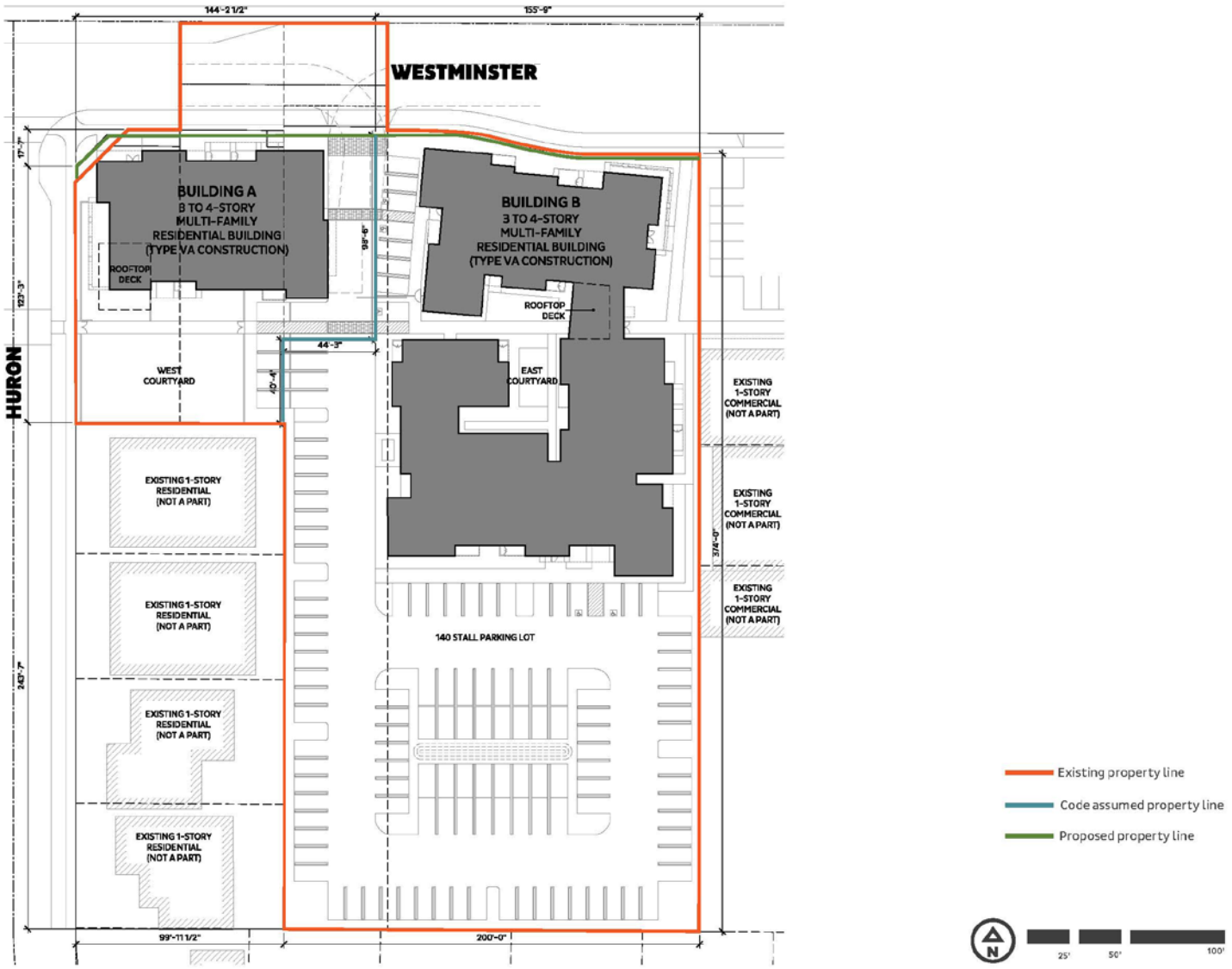

Figure 5 Landscape Plan

Figure 6 North and West Elevations

Figure 7 South and East Elevations

9. Surrounding Land Uses and Setting

As shown in Figure 2, land uses surrounding the project site include Westminster Avenue to the north with commercial/retail uses beyond; commercial/retail uses to the east; single-family residences to the south; and North Huron Drive and single-family residences to the west with additional single-family residences and commercial/retail uses beyond. The project site is walking distance from three transit stop pairs within 0.25-mile of the site (two located on Westminster Avenue and one on North Fairview Street) serviced by the Orange County Transit Authority (OCTA). The site is located approximately 600 feet west of the Santa Ana River.

10. Other Public Agencies Whose Approval is Required

This document is intended to cover all discretionary approvals needed to construct and operate the proposed project. The proposed project would require approval of a General Plan Amendment from General Commercial (GC) to Urban Neighborhood (UN), and a Zone Change from Commercial General (C2) to Specific Development No. 97 (SD-97). At this time, no discretionary public agency approvals are known to be required for the project other than those required by the City of Santa Ana.

11. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1?

The City of Santa Ana sent a Local Government Tribal Consultation List Request to the Native American Heritage Commission (NAHC) to obtain a list of Native American tribes with jurisdiction in the project area. The NAHC responded to the City's request on August 20, 2020 with a consultation list of 17 tribes to contact because of their traditional and cultural affiliation with the geographic area in which the project is located. Based on this list, and per Public Resources Code (PRC) Section 21080.3.1., the City sent consultation request letters on August 26, 2020 to the 17 tribes and have since received responses from the Juaneño Band of Mission Indians, Acjachemen Nation - Belardes and Gabrieleño Band of Mission Indians - Kizh Nation, requesting consultation to discuss the project in further detail. Following these requests, a consultation phone call between Joyce Stanfield Perry, representative of the Acjachemen Nation – Belalrdes, and City staff occurred on October 13, 2020. A following consultation phone call between Chairman Andrew Salas and Matthew Teutimez, representatives of the Kizh Nation, and City Staff occurred on October 28, 2020.

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Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☐	Air Quality
■	Biological Resources	■	Cultural Resources	☐	Energy
■	Geology/Soils	☐	Greenhouse Gas Emissions	☐	Hazards and Hazardous Materials
☐	Hydrology/Water Quality	☐	Land Use/Planning	☐	Mineral Resources
■	Noise	☐	Population/Housing	☐	Public Services
☐	Recreation	☐	Transportation	■	Tribal Cultural Resources
☐	Utilities/Service Systems	☐	Wildfire	☐	Mandatory Findings of Significance

Determination

Based on 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 to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "less than significant with mitigation incorporated" 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 the 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 potential 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.

Selena Kelaher
Signature

11/6/20
Date

Selena Kelaher
Printed Name

Associate Planner
Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in PRC Section 21099, would the project:				
Have a substantial adverse effect on a scenic vista?	☐	☐	☐	■
Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	■
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 a 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?	☐	☐	■	☐
Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	■	☐

a. Would the project have a substantial adverse effect on a scenic vista?

Scenic vistas can be impacted by development through the construction of a structure that blocks the view of a vista or by impacting the vista itself through development that alters a scenic resource. Visual resources are determined by identifying existing landforms (e.g., topography and grading), views (e.g., scenic resources such as natural features or urban characteristics), viewing points/locations, and existing light and glare (e.g., nighttime illumination). As shown in Figure 2, the project site is in an urban setting and does not contain any scenic vistas. There are no scenic vistas visible along Westminster Avenue or North Huron Drive in the project site vicinity. Santa Ana is highly urbanized, and therefore, views within the city are characterized by an urban landscape. Generally, the background is shaped by urban landforms, and surrounding area is not identified as a Historic District or an area identified as having a special visual character. The Santa Ana General Plan (2010) scenic corridors element identifies selected views of the city from SR-22 and I-5; however, the project site is not within view of either freeway (Santa Ana 2010). Any background views of distant mountains or hillsides are intermittent and blocked by buildings and landscaping.

Furthermore, the project site is generally flat and currently vacant with ruderal vegetation, ornamental trees, a billboard, with some asphalt paving and concrete foundations on the eastern

side of the site. A chain-link fence occurs along the northern and western boundaries of the site. Figure 3, Figure 8a, and Figure 8b show the existing project site. The project would convert the vacant lots into two 3- to 4-story buildings with a maximum height of approximately 45 feet, with courtyard space and surface parking. The buildings would front Westminster Avenue, and the courtyard and parking areas would be further south and set back from Westminster Avenue. Parking areas would not be visible from street view (Figure 5). Figure 6 and Figure 7 depict architectural elevations of the proposed buildings, which show that the project would not be of sufficient height to be distinctly visible from SR-22 and I-5 or have other adverse effect on scenic vistas. Therefore, no impact to scenic vistas would occur.

NO IMPACT

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

According to the California Department of Transportation (Caltrans), there are no officially designated or eligible state scenic highways adjacent to or in the proximity of the project site. The nearest scenic highway is the portion of SR-91 at its junction with SR-55 located approximately 7.5 miles northeast of the site (Caltrans 2018). At its distance, this portion of SR-91 is not visible from the project site. Furthermore, according to the City's 2010 General Plan, no County-designated scenic highways run through Santa Ana (Santa Ana 2010). Therefore, the project would not substantially damage scenic resources within a state scenic highway and no impact would occur.

NO IMPACT

c. Would the project, 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 a 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?

The project is in an urban area of the city that is primarily developed with residential, commercial, and industrial uses. The proposed project would require approval of a General Plan Amendment to change the land use designation of the project site from General Commercial (GC) to Urban Neighborhood (UN), and a Zone Change to change the zoning of the project site from Commercial General (C2) to Specific Development No. 97 (SD-97). The project would adhere to all design requirements of the City's General Plan for the UN designation, which allows for a mix of residential uses and housing types, such as mid- to low-rise multiple family, with some opportunities for live-work, neighborhood serving retail and service, public spaces and use, and other amenities (Santa Ana 2010). Consistent with the UN designation, the project would convert the vacant lots into a three- to four-story multi-family residential development with public spaces (i.e., courtyards, walkways, and a children's playground). The project would also be compatible with the densities of surrounding one- to three-story urban residential and commercial uses, including the existing three-story, courtyard-style multi-family housing approximately 550 feet to the west along Westminster Avenue. All aspects of the Santa Ana Municipal Code (SAMC) regulating building height, floor area ratio (FAR), architectural style and design, landscaping, setbacks, parking, open space, trash enclosures, mechanical equipment, and other considerations that regulate aesthetic impacts would apply to the project. Furthermore, according to City standards in SAMC Section 41-593.4, the City reviews proposed development projects for the purpose of ensuring that proposed buildings, structures, and grounds would be compatible with the neighborhood and would not be detrimental

to the harmonious development of the city. Therefore, the project's proposed General Plan Amendment and Zone Change would have a less than significant impact related to other regulations governing scenic quality.

LESS THAN SIGNIFICANT IMPACT

Figure 8a Views of the Project Site

View of the project site from Westminster Avenue, facing south (Google Earth 2020)

View of the project site from North Huron Drive, facing east (Google Earth 2020)

Figure 9b Views of the Project Site

View of the project site (on right) along North Huron Drive, facing north (Google Earth 2020)

View of the project site (on right) along Westminster Avenue, facing east (Google Earth 2020)

d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

The project is in an urban area of the city that is primarily developed with residential, commercial, and industrial uses. The main sources of daytime and nighttime light and glare in the project area are streetlights and exterior lighting associated with existing urban uses and associated vehicles, including vehicles on Westminster Avenue. The project would create new lighting on the project site associated with the proposed residential units. New sources of light and glare would come from windows, outdoor common area roof decks, outdoor safety lighting, and vehicles accessing the project site. The project's building exteriors would be comprised mainly of cement plaster with composite wood accents and would not substantially increase daytime glare.

Section 41-611 of the SAMC states that "All site lighting shall be arranged as to not unreasonably interfere with adjacent residences". The project would incorporate limited on-site lighting typical of multi-family residences and abide by the lighting requirements of the SAMC so as to not interfere with single-family residences adjacent to the site to the south and west. Proposed front, rear, and side building setbacks would further reduce the potential for light to trespass into neighboring residences. Furthermore, as a residential use, the project would not include installation of major light sources, such as illuminated signage.

Project lighting would be similar to that of surrounding development and implementation of the project would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the project area. Therefore, the project would result in a less than significant impact with respect to light and glare.

LESS THAN SIGNIFICANT IMPACT

2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on 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 PRC Section 12220(g)); timberland (as defined by PRC 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. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The project is in an urban area of the city that is primarily developed with residential, commercial, and industrial uses. Furthermore, the project site does not currently have any agricultural use. The project site and immediate surrounding areas are not designated Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance (Farmland) (California Department of Conservation [DOC] 2018). The nearest Farmland-designated land can be found in the nearby cities of Irvine and Orange are located approximately 18.5 miles northwest of the project site, although the land is not currently used for agricultural purposes. In addition, according to the City's 2010 General Plan, the city does not contain substantial agricultural resources; therefore, no impacts to farmland would occur from the proposed project.

NO IMPACT

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

The project is in an urban area of the city that is primarily developed with residential, commercial, and industrial uses. Furthermore, the project site does not currently have any agricultural use. The project site and immediate surrounding areas are not designated Farmland and are designated as urban and built-up land according to the DOC's Farmland and Monitoring Program. Therefore, no farmland is present on or near the project site, nor is any land under Williamson Act contracts (DOC 2018). No impact would occur.

NO IMPACT

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)); timberland (as defined by PRC Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

The city does not contain any land designated or zoned as forest land, timberland, or timberland production (Santa Ana 2010). In addition, no forest land exists on the project site or its vicinity as it is a highly urbanized area. Therefore, the proposed project would result in no impact.

NO IMPACT

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

The project is in an urban area of the city that is primarily developed with residential, commercial, and industrial uses. Neither the project site nor surrounding parcels are zoned for forest land, timberland, or timberland production. Therefore, the project would not result in the loss of forest land or conversion of forest land to non-forest land. No impact would occur.

NO IMPACT

e. Would the project 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?

The project site is in an urbanized area of the city that is not currently used for agriculture or forest land (Santa Ana 2010). Therefore, the project would not result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
f. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
g. 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?	☐	☐	■	☐
h. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	■	☐

Air Quality Standards and Attainment

The project site is in the South Coast Air Basin (Basin), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, and all of Orange County. The Basin is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). As the local air quality management agency, the SCAQMD is required to monitor air pollutant levels to ensure that state and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards.

Depending on whether the standards are met or exceeded, the Basin is classified as being in "attainment" or "non-attainment." Under State law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-compliance. The SCAQMD is in non-attainment for the federal standards for ozone and $PM_{2.5}$ (fine particulate matter which measures no more than 2.5 microns in diameter) and the State standards for ozone, PM_{10} (small particulate matter which measures no more than 10 microns in diameter), and $PM_{2.5}$. The Los Angeles County portion of the Basin is also designated non-attainment for lead (SCAQMD 2016). The Basin is designated unclassifiable or in attainment for all other federal and State standards. The health effects associated with criteria pollutants for which the Basin is in non-attainment are described in Table 2.

Table 2 Health Effects Associated with Non-Attainment Criteria Pollutants

Pollutant	Adverse Effects
Ozone	(1) Short-term exposures: (a) pulmonary function decrements and localized lung edema in humans and animals and (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals; (2) long-term exposures: risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (3) vegetation damage; and (4) property damage.
Suspended particulate matter (PM_{10})	(1) Excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease (including asthma).[1]
Suspended particulate matter ($PM_{2.5}$)	(1) Excess deaths from short- and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes, including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children, such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease, including asthma.[1]
Lead	(1) Short-term overexposures: lead poisoning can cause (a) anemia, (b) weakness, (c) kidney damage, and (d) brain damage; (2) long-term exposures: long-term exposure to lead increases risk for (a) high blood pressure, (b) heart disease, (c) kidney failure, and (d) reduced fertility.

[1] More detailed discussion on the health effects associated with exposure to suspended particulate matter can be found in the following documents: United States Environmental Protection Agency (USEPA), Air Quality Criteria for Particulate Matter, October 2004.

Sources: USEPA 2018a; Centers for Disease Control and Prevention (CDC) 2019

Air Quality Management

Under State law, the SCAQMD is required to prepare an air quality improvement plan for pollutants which the SCAQMD is in non-compliance. The SCAQMD administers the Air Quality Management Plan (AQMP) for the Basin, which is a comprehensive document outlining an air pollution control program for attaining all California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS). The most recently adopted AQMP is the 2016 AQMP (SCAQMD 2017), which was adopted by the SCAQMD Governing Board on March 3, 2017. The 2016 AQMP represents a new approach, focusing on available, proven, and cost-effective alternatives to traditional strategies while seeking to achieve multiple goals in partnership with other entities promoting reductions in greenhouse gases (GHGs) and toxic risk, as well as efficiencies in energy use, transportation, and goods movement (SCAQMD 2017). The 2016 AQMP incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2012 AQMP, including the approval of the new federal 8-hour ozone standard of 0.070 parts per million (ppm) that was finalized in 2015.

The 2016 AQMP addresses several State and federal planning requirements and incorporates new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and meteorological air quality models. The Southern California Association of Governments' (SCAG) projections for socio-economic data (e.g., population, housing, employment

by industry) and transportation activities from the 2016 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) are integrated into the 2016 AQMP. This Plan builds upon the approaches taken in the 2012 AQMP for the attainment of federal PM and ozone standards and highlights the significant amount of reductions to be achieved. It emphasizes the need for interagency planning to identify additional strategies to achieve reductions within the timeframes allowed under the federal Clean Air Act, especially in the area of mobile sources. The 2016 AQMP also includes a discussion of emerging issues and opportunities, such as fugitive toxic particulate emissions, zero-emission mobile source control strategies, and the interacting dynamics among climate, energy, and air pollution. The Plan also demonstrates strategies for attainment of the new federal 8-hour ozone standard and vehicle miles traveled (VMT) emissions offsets, pursuant to recent USEPA requirements (SCAQMD 2017).

Air Emission Thresholds

The CEQA Guidelines (Section 15064.7) provide that, when available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make determinations of significance. These thresholds are designed such that a project that would not exceed the adopted thresholds would not result in an individually or cumulatively significant impact on the Basin's air quality. Therefore, a project that does not exceed these SCAQMD thresholds would have a less than significant impact. This Initial Study conforms to the methodologies recommended in the SCAQMD's *CEQA Air Quality Handbook* (1993) and supplemental guidance provided by the SCAQMD, including recommended thresholds for emissions associated with both construction and operation of the project (SCAQMD 2015).

Table 3 presents the significance thresholds for construction and operational-related criteria air pollutant and precursor emissions being used for the purposes of this analysis. These represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the Basin's existing air quality conditions. For the purposes of this analysis, the proposed project would result in a significant impact if construction or operational emissions would exceed any of the thresholds shown in Table 3.

Table 3 SCAQMD Regional Significance Thresholds

Construction Thresholds	Operational Thresholds
75 pounds per day of ROG	55 pounds per day of ROG
100 pounds per day of NO_X	55 pounds per day of NO_X
550 pounds per day of CO	550 pounds per day of CO
150 pounds per day of SO_X	150 pounds per day of SO_X
150 pounds per day of PM_{10}	150 pounds per day of PM_{10}
55 pounds per day of $PM_{2.5}$	55 pounds per day of $PM_{2.5}$

ROG: reactive organic gases; NO_x: nitrogen oxides; CO: carbon monoxide; SO_x: sulfur oxides; PM_{10}: small particulate matter which measures no more than 10 microns in diameter; $PM_{2.5}$: fine particulate matter which measures no more than 2.5 microns in diameter

Source: SCAQMD 2015

Localized Significance Thresholds

In addition to the above regional thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the *CEQA Air Quality Handbook* (1993). LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local

communities and have been developed for NO_X (nitrogen oxides), CO (carbon monoxide), PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), distance to the sensitive receptor, and project size. LSTs have been developed for emissions generated in construction areas up to five acres in size. However, LSTs only apply to emissions in a fixed stationary location and are not applicable to mobile sources, such as cars on a roadway (SCAQMD 2008a). As such, LSTs are typically applied only to construction emissions because most operational emissions are associated with project-generated vehicle trips.

The project site is located in Source Receptor Area 17 (SRA-17), Central Orange County, and is 2.1 acres in size (SCAQMD 2008a). The SCAQMD provides LSTs for one-, two-, and five-acre project sites at distances of 82 to 1,640 feet (25 to 500 meters) from the project site boundary. The project site is marginally greater than two acres; accordingly, this analysis uses LSTs for construction on a site that is two acres. Sensitive receptors closest to the project site consist of single-family residences adjacent to the site to the south and west, and additional single-family residences across North Huron Drive approximately 60 feet to the west. According to the SCAQMD, projects with boundaries located closer than 82 feet to the nearest receptor should use the LSTs for receptors located at 82 feet. Therefore, Table 4 summarizes the LSTs for a two-acre site in SRA-17 with sensitive receptors located at a distance of 82 feet.

Table 4 SCAQMD LSTs for Construction Emissions

Pollutant	Allowable Emissions from a 2-Acre Site in SRA-17 for a Receptor 82 Feet Away
Gradual conversion of NO_X to NO_2	202
CO	4,018
PM_{10}	88
$PM_{2.5}$	32

NO_x: nitrogen oxides; NO_2: nitrogen dioxide; CO: carbon monoxide; PM_{10}: small particulate matter which measures no more than 10 microns in diameter; $PM_{2.5}$: fine particulate matter which measures no more than 2.5 microns in diameter

Source: SCAQMD 2009

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding the forecasts used in the development of the AQMP. The 2016 AQMP relies on local general plans and the SCAG 2016 RTP/SCS forecasts of regional population, housing, and employment growth in its own projections for managing air quality in the Basin.

The growth projections used by the SCAQMD to develop the AQMP emissions budgets are based on the population, vehicle trends, and land use plans developed in general plans and used by SCAG in the development of the 2016 RTP/SCS. As such, projects that are consistent with the growth anticipated by SCAG's growth projections and the General Plan would not conflict with the AQMP. If a project is less dense than anticipated by the growth projections, the project would likewise be consistent with the AQMP.

The project would involve construction of 85 apartment units and associated parking on a currently vacant 2.1-acre project site, which would cause a direct increase in the city's population by introducing new residents to the project site. As discussed in Section 14, *Population and Housing*, the California Department of Finance's (DOF) 2020 population estimate for Santa Ana is 335,052 (DOF 2020). Given an average household size of 4.30 persons per household for Santa Ana, the project would generate an increase of approximately 366 residents (85 units x 4.30 persons per unit) in the city (United States Census 2020).

SCAG forecasts the population of Santa Ana will increase to approximately 343,100 by the year 2040, which is an increase of 8,048 persons from the current population (SCAG 2016). The addition of 366 residents in the project area would constitute an estimated 4.5 percent of the city's projected population growth through year 2040. Therefore, the level of population growth associated with the proposed project would not exceed regional population projections. Furthermore, this analysis conservatively assumes that all project residents are new to Santa Ana, whereas the likely scenario is that some of the future project residents may already live in the city. The project would not conflict with the SCAQMD's AQMP and the population increase generated by the proposed project would not substantially alter air quality conditions in the Basin and would not generate emissions that would adversely affect regional air quality. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project 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?

Air pollution is largely a cumulative impact. The non-attainment status of regional pollutants is a result of past and present development, and the SCAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. If a project's emissions would exceed the SCAQMD significance thresholds, it is considered to have a cumulatively considerable contribution. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

As discussed under *Air Quality Standards and Attainment*, the Basin has been designated as a federal non-attainment area for ozone and $PM_{2.5}$ and a State non-attainment area for ozone, PM_{10}, and $PM_{2.5}$. The Basin is designated unclassifiable or in attainment for all other federal and State standards. The proposed project does not include any stationary sources of lead emissions. Therefore, implementation of the project would not result in substantial emissions of lead and this pollutant is not discussed further in this analysis.

The following analysis evaluates air pollutant emissions generated by project construction and operation compared to the regional significance thresholds established by the SCAQMD in the *CEQA Air Quality Handbook* (1993), as well as the SCAQMD LSTs. Construction and operational air pollutant emissions were modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2.

Construction Emissions

Project construction would primarily generate temporary criteria pollutant and GHG emissions from construction equipment operation on-site, construction worker vehicle trips to and from the site, and from export of materials off-site. Construction input data for CalEEMod include, but are not limited to the following applicant-provided information: (1) the schedule of construction activity; (2) the inventory construction equipment to be used; (3) areas to be excavated and graded; and (4) volumes of soil materials to be imported to the project site. The analysis assessed maximum daily emissions from individual construction activities, including site preparation, grading, building construction, paving, and architectural coating. Grading, excavation, hauling, and site preparation would involve the greatest use of heavy equipment and generation of fugitive dust. Full modeling assumptions are included in Appendix A.

Table 5 summarizes the estimated maximum daily emissions of pollutants associated with construction of the proposed project. Emissions modelling accounts for compliance with the SCAQMD Rule 403, which regulates fugitive dust emissions during the project's demolition, grading, and construction activities to minimize emissions of PM_{10} and $PM_{2.5}$ and SCAQMD Rule 1113, which regulates the volatile organic compound (VOC) content of architectural coatings to minimize emissions of reactive organic gases (ROGs) during construction activities.

Table 5 Estimated Construction Emissions

	Estimated Maximum Daily Emissions (lbs/day)					
Construction Year	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
2021 Maximum	4	31	34	<1	4	3
2022 Maximum	13	65	82	<1	5	4
2023 Maximum	12	60	81	<1	4	3
Maximum Emissions	**13**	**65**	**82**	**<1**	**5**	**4**
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Maximum On-site Emissions	7	29	31	<1	4	3
Local Significance Thresholds (LSTs) (on-site emissions only)[1]	N/A	202	4,018	N/A	88	32
Threshold Exceeded?	**N/A**	**No**	**No**	**N/A**	**No**	**No**

lbs/day: pounds per day; ROG: reactive organic gases; NO_x: nitrogen oxides; CO: carbon monoxide; SO_2: sulfur dioxide; PM_{10}: coarse particulate matter; $PM_{2.5}$: fine particulate matter

[1] LSTs are for a two-acre project site in SRA-17 within 82 feet from the site boundary.

Notes: All emissions modeling was completed using the CalEEMod. See Appendix A for modeling results. Some numbers may not add up due to rounding. Emission data is pulled from CalEEMod's "mitigated" results, which is a term of art for the modeling output and is not equivalent to mitigation measures that may apply to the CEQA impact analysis. The CalEEMod "mitigated" results account for compliance with regulations and project design features. Emissions presented are the highest of the winter and summer modeled emissions.

As shown in Table 5, construction of the proposed project would not result in criteria pollutant emissions that would exceed the SCAQMD regional thresholds or LSTs. Therefore, project construction 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. Construction impacts would be less than significant.

Operational Emissions

Development of the project would result in long-term air pollutant emissions over the course of operation. Emissions include area sources, energy sources, and mobile emissions. Area sources include use of consumer products, use of gas-powered landscaping equipment, and re-application of architectural coating (re-painting). Energy sources include natural gas for uses such as heating/air conditioning, appliances, lighting, and water heating. Mobile emissions include vehicle trips from project residents. Fehr & Peers prepared a Transportation Impact Analysis (TIA) for the project, which determined that the project would result in an increase of 462 daily trips (Appendix E) based on the Institute of Transportation Engineers (ITE) Trip Generation Manual 10th Edition Multi-family Mid-Rise land use rate. The trip generation rate used in the TIA for the project was also included in CalEEMod. Full modeling assumptions are included in Appendix A.

Table 6 summarizes the estimated maximum daily emissions of pollutants associated with operation of the proposed project. Most project-related operational emissions would result from vehicle trips to and from the site.

Table 6 Estimated Operational Emissions

	Maximum Daily Emissions (lbs/day)					
Emission Source	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	2	<1	7	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile[1]	1	4	12	<1	5	1
Total Project Emissions	**3**	**4**	**20**	**<1**	**5**	**1**
SCAQMD Regional Thresholds	55	55	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

lbs/day: pounds per day; ROG: reactive organic gases; NO_x: nitrogen oxides; CO: carbon monoxide; SO_2: sulfur dioxide; PM_{10}: coarse particulate matter; $PM_{2.5}$: fine particulate matter

[1] To account for the effects of the Part One Rule, California Air Resources Board (CARB) released off-model adjustment factors on November 20, 2019 to adjust criteria air pollutant emissions outputs from the EMFAC model. These off-model adjustment factors are applied by multiplying the emissions calculated for light- and medium-duty vehicles by the adjustment factor. With the incorporation of these adjustment factors, operational emissions generated by light-duty automobiles, light-duty trucks, and medium-duty trucks associated with project-related vehicle trips at the year 2021 would be approximately 0.01 percent greater for ROG, 0.09 percent greater for particulate matter, 0.02 percent greater for NO_x, and 0.05 percent greater for CO. These increases would have a negligible impact on overall operational emissions generated by the project and would not alter the significance of the project's operational emissions.

Notes: All emissions modeling was completed using CalEEMod. See Appendix A for modeling results. Some numbers may not add up due to rounding. Emission data is pulled from CalEEMod's "mitigated" results which is a term of art for the modeling output and is not equivalent to mitigation measures that may apply to the CEQA impact analysis. The CalEEMod "mitigated" results include compliance with regulations and project design features that would be included in the project. Emissions presented are the highest of the winter and summer modeled emissions.

As shown in Table 6, project emissions would not exceed the SCAQMD regional thresholds for criteria air pollutants; therefore, project construction 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. Operational impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors are those individuals more susceptible to the effects of air pollution than the population at large. People most likely to be affected by air pollution include children, the elderly, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). The proposed project would not introduce new sensitive receptors to the project site. Off-site sensitive receptors nearest to the project site consist of single-family residences adjacent to the site to the south and west, and additional single-family residences across North Huron Drive approximately 60 feet to the west.

Local Carbon Monoxide (CO) Hotspots

A CO hotspot is a localized concentration of CO that exceeds the State 1-hour or 8-hour CO ambient air standards (SCAQMD 2008a). Localized CO hotspots can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal one-hour standard of 35.0 ppm or the federal and State eight-hour standard of 9.0 ppm (CARB 2016).

The SCAQMD conducted a detailed CO analysis for the Basin during the preparation of the 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the Basin, which would be expected to experience the highest CO concentrations. The highest CO concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of the City of Los Angeles near Interstate 405located approximately 37 miles northwest of the site, which has an ADT of approximately 100,000 vehicles per day. The concentration of CO at this intersection was 4.6 ppm, which is well below the 35-ppm 1-hour CO federal standard and the State standard of 20 ppm. Furthermore, the Basin has been in attainment of federal CO standards since 2007 (SCAQMD 2016). No stations in the vicinity of the project site have monitored CO in the last eight years. The highest 8-hour CO average recorded at the nearest monitoring, the Azusa monitoring station located approximately 4.6 miles northeast of the project site, was 1.13 ppm in 2012 (the most recent year for which data is available), which is well below the 8-hour CO federal and State standard of 9 ppm (CARB 2020).

As shown in Table 5, maximum daily CO construction emissions would be approximately 82 pounds and maximum on-site emissions would be approximately 32 pounds, which would not exceed the SCAQMD's regional threshold [550 pounds per day (lbs/day)] or LST (4,108 lbs/day) for CO. Likewise, as shown in Table 6, net new operational emissions from area, energy, and mobile sources combined would be approximately 20 pounds of CO emissions per day, which is below the SCAQMD regional threshold of 550 pounds. Both the SCAQMD's regional thresholds and LSTs are designed to be protective of public health. Based on the low background level of CO in the project area, ever-improving vehicle emissions standards for new cars in accordance with state and federal regulations, and the project's low level of operational CO emissions, the project would not create

new hotspots or contribute substantially to existing hotspots. Localized air quality impacts related to CO hot spots would be less than significant.

Toxic Air Contaminants

Toxic air contaminants (TACs) are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SCAQMD recommends an incremental cancer risk threshold of 10 in 1 million. "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will contract cancer, typically based on the use of standard Office of Environmental Health Hazard Assessment (OEHHA) risk-assessment methodology (OEHHA 2015). In addition, some TACs have noncarcinogenic effects. The SCAQMD recommends a Hazard Index of 1 or more for acute (short-term) and chronic (long-term) non-carcinogenic effects.

The greatest potential for TAC emissions associated with the proposed project would occur during construction and would be from diesel particulate emissions associated with heavy equipment operations. Diesel particulate matter emissions would be produced by heavy equipment operations and heavy-duty trucks. Heavy-duty construction equipment is subject to a CARB Airborne Toxics Control Measure for in-use diesel construction equipment to reduce diesel particulate emissions. As shown in Table 5, total PM_{10} construction emissions, which includes exhaust PM_{10} (representative of diesel particulate matter) and fugitive dust PM_{10} (representative of airborne particulate matter) exposure. would be below SCAQMD regional and local thresholds.

According to the OEHHA, health risk assessments that determine the exposure of sensitive receptors to toxic emissions should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the project. Therefore, the duration of the proposed construction activities would constitute a small percentage of the total 30-year exposure period. Due to this relatively short period of exposure and minimal emissions on site, TACs generated during construction would not result in concentrations causing significant health risks.

Furthermore, the project does not propose routine operational activities following completion of on-site construction that would generate TAC emissions. Operation of the proposed project would not result in any nonpermitted direct emissions (e.g., those from a point source such as diesel generators) or result in a substantial increase in diesel vehicles (i.e., delivery trucks). There would be no residual emissions or corresponding individual cancer risk after project construction is complete and on-site construction activities cease. As such, the project would not result in substantial TAC exposure to sensitive receptors in the vicinity of the proposed project and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of the receiving location, each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the project, which would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment and architectural coatings. Such odors would disperse rapidly from the project site, generally occur at magnitudes that would not affect substantial numbers of people and would be limited to the construction period. Impacts associated with odors during construction would be temporary and less than significant.

With respect to operation, the SCAQMD's *CEQA Air Quality Handbook* (1993) identifies land uses associated with odor complaints as agricultural uses, wastewater treatment plants, chemical and food processing plants, composting, refineries, landfills, dairies, and fiberglass molding. Residential uses are not identified on this list as a use associated with odor complaints. In addition, solid waste generated by the project would be temporarily stored in on-site trash enclosures before collection by a contracted waste hauler, ensuring that odors resulting from on-site waste would be managed and disposed of in a manner to prevent the proliferation of odors. Therefore, the proposed project would not generate objectionable odors affecting a substantial number of people, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

4 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, or 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?	☐	☐	☐	■
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?	☐	☐	☐	■

The analysis presented in this section is based on a review of available technical information regarding biological resources in the project vicinity. In order to obtain comprehensive information regarding the presence or potential presence of sensitive biological resources (including special status species, sensitive communities, and jurisdictional waters and wetlands) in the vicinity of the project site, queries of the United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS): Information, Planning and Conservation System (IPaC) (USFWS 2020a), USFWS Critical Habitat Portal (USFWS 2020b), USFWS National Wetland Inventory (NWI) (USFWS 2020c), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2020a), CDFW Biogeographic Information and Observation System (BIOS) (CDFW 2020b) and California Native Plant Society (CNPS) Online Inventory of Rare, Threatened and Endangered Plants of California (CNPS 2020) were conducted.

a. Would the project 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?

Special status species are those plants and wildlife listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS under the Federal Endangered Species Act (FESA); those considered "Species of Concern" by the USFWS; those listed or candidates for listing as Rare, Threatened, or Endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as "Fully Protected" by the California Fish and Game Code (CFGC); wildlife listed as Species of Special Concern (SSC) by the CDFW; and plants with CNPS California Rare Plant Ranks (CRPR) of 1B, 2, 3, and 4. The potential for special status plant and wildlife species to occur at the project site was assessed based on a review of a five-mile search of the CNDDB (CDFW 2020b) and nine-quadrangle search of the CNPS (CNPS 2020).

Santa Ana is in a largely urbanized portion of Orange County, with limited areas of natural vegetation. Natural communities in the city include oak woodland, riparian, ornamental, and ruderal communities (Santa Ana 2020a). Species identified as a candidate, sensitive, or special status species in the Santa Ana Draft General Plan Update are included below. The species below have been recorded in the region (Santa Ana 2020a):

- Steelhead - southern California distinct population segment (*Oncorhynchus mykiss irideus*), federally endangered
- Coast horned lizard (*Phrynosoma blainvillii*), CDFW SSC
- Crotch bumble bee (*Bombus crotchii*) candidate state endangered
- Mexican long-tongued bat (*Choeronycteris mexicana*), CDFW SSC American peregrine falcon (*Falco peregrinus anatum*), CDFW Fully Protected

The project site is in an urbanized area with residential, commercial, and industrial uses in the vicinity. The site itself predominately consists of highly disturbed ruderal vegetation, including three mature, ornamental trees such as Mexican fan palm (*Washingtonia robusta*), as well as a billboard, asphalt paving and concrete foundations on the eastern side of the site. All areas of the project site show signs of having been disturbed from previous development and a parking lot.

Given the developed and highly disturbed nature of the project site in an urban area, the project site does not provide suitable habitat for special status species. As such, the project site is not expected to support any candidate, sensitive, or special status species and none have a moderate or

high potential to occur. Therefore, development of the proposed project would not have a substantial, adverse effect on special status species.

While common birds are not designated as special status species, destruction of their eggs, nests, and nestlings is prohibited by federal and state law. The vegetation present on the project site could provide nesting habitat for common resident birds. The large ornamental trees onsite could provide low-quality potential habitat for nesting raptors. Nesting birds are protected under the CFGC Sections 3503, 3503.5, and 3513 as well as the Migratory Bird Treaty Act (MBTA). Violation of these provisions would be considered a potentially significant impact. The project could directly (e.g., vegetation removal leading to injury or mortality) and indirectly (e.g., construction noise, dust, vibration) affect nesting of these species.

Implementation of Mitigation Measure BIO-1 would require nesting bird avoidance to minimize potential conflicts with the MBTA and CFGC, thereby reducing potential impacts to a less than significant level.

Mitigation Measure

BIO-1 Nesting Bird Avoidance

Prior to issuance of grading permits, the following measures shall be implemented:

- To avoid disturbance of nesting birds, including raptorial species protected by the MBTA and CFGC, activities related to the project, including, but not limited to, vegetation removal, ground disturbance, and construction and demolition shall occur outside of the bird breeding season (February 1 through August 31, bug variable based on seasonal and annual climatic conditions). If construction must begin during the breeding season, then a pre-construction nesting bird survey shall be conducted no more than seven days prior to initiation of construction activities. The nesting bird pre-construction survey shall be conducted on foot inside the project site, including a 100-foot buffer, and in inaccessible areas (e.g., private lands) from afar using binoculars to the extent practical. The survey shall be conducted by a qualified biologist familiar with the identification of avian species known to occur in southern California.
- If nests are found, an avoidance buffer shall be demarcated by a qualified biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No parking, storage of materials, or construction activities shall occur within this buffer until the biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist.
- A survey report by the qualified biologist documenting and verifying compliance with this measure and with applicable state and federal regulations protecting nesting birds shall be submitted to the City. The qualified biologist shall serve as a construction monitor during those periods when construction activities would occur near active nests to ensure that no inadvertent impacts on the nests would occur.

Implementation of Mitigation Measure BIO-1 would avoid direct and indirect impacts to nesting birds.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Plant communities are considered sensitive biological resources if they have limited distributions, have high wildlife value, including sensitive species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities (CDFW 2019) and maintains records of their occurrences in the CNDDB. According to the City's 2010 General Plan, the nearest riparian habitat is Santiago Creek, which is located approximately a mile northeast of the site where it flows into a soft-bottom portion of the Santa Ana River. The project site itself is highly disturbed with non-native, ruderal or ornamental vegetation and evidence of prior development. It does not contain any riparian habitat or sensitive natural communities. Therefore, the project would not have a substantial adverse effect on riparian or other sensitive natural communities. No impact would occur.

LESS THAN SIGNIFICANT IMPACT

c. Would the project 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?

As discussed under impact discussion *b.* of this section, the project site is in an urban area with residential, commercial, and industrial uses in the vicinity. While a concrete, channelized portion of the Santa Ana River is located approximately 500 feet east of the project site, no riparian habitats, wetlands, or other water features have been identified on or immediately adjacent to the site (USFWS 2020c) that would potentially be impacted by project activities. Further, the project site does not include any discernable drainage courses, inundated areas, or wetland vegetation. While the soil type underlying the project site, Metz loamy sand, is considered hydric (USDA 2020), it does not support any wetlands or other waters. As a result, no state or federally protected wetlands or other waters that may be considered jurisdictional by the CDFW, United States Army Corps of Engineers (USACE), or Regional Water Quality Control Board (RWQCB) occur on or adjacent to the project site. Therefore, the proposed project would not directly or indirectly have a substantial adverse effect on state or federally protected wetlands or other jurisdictional waters. No impact would occur.

NO IMPACT

d. Would the project 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?

Wildlife corridors are generally defined as connections between habitat areas that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as between foraging and denning areas, or they may be regional in nature, allowing movement across the landscape. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Examples of barriers or impediments to movement include housing and other urban development, roads, fencing, unsuitable habitat, or open areas with little vegetative cover.

As discussed under impact discussions *a.* through *c.* of this section, the project site is currently vacant and highly disturbed. The site is separated from any open space areas by existing development and roadways. The project site does not contain any natural communities or habitat

areas that would be expected to support populations of native wildlife nurseries or movement. While the project site contains trees, these trees are ornamental and are not part of a larger habitat area; they are surrounded by development and do not form a natural community or constitute a habitat area.

Due to their fully developed nature, the project site and surrounding area do not contain any natural or physical features that connect habitat areas, and impacts to the movement of native or resident species or to the use of native wildlife nursery sites resulting from the proposed project are not expected. Therefore, no impact would occur.

NO IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

According to the City's Draft General Plan Update Program Environmental Impact Report (PEIR), completed for the City's General Plan Update in 2020, the City has been a part of the Tree City USA program for 20 years since it was first recognized in 1999. The city's urban forest consists of 60,000 healthy and attractive trees that improve the look, feel, and health of the community (Santa Ana 2020a). The planting, maintenance, and removal of public trees in the city is regulated by SAMC Chapter 33, Article VII. The project site contains existing mature trees that are on private property and would not be subject to SAMC regulations. However, the project would also involve the removal of existing public trees and the planting of new trees along Westminster Avenue and North Huron Drive. Therefore, the project would be subject to SAMC Chapter 33, Article VII, which states that a site plan review shall require the planting of street trees to coincide with the development, redevelopment, renovating of any tract or parcel for site plan approval. Upon compliance with the SAMC Chapter 33, Article VII, the project would not conflict with any local policies or ordinances protecting biological resources. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation

The City does not have an adopted Habitat Conservation Plan or Natural Community Conservation Plan. The project site does not contain any natural lands that are subject to other approved local, regional, or State habitat conservation plans. No impact would occur.

NO IMPACT

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5 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 Section 15064.5?	☐	☐	☐	■
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	■	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	■	☐

The analysis in this section is based primarily on a Cultural Resources Assessment Report (CRA Report) prepared by Rincon Consultants, Inc. in June 2020. The CRA Report is included as Appendix B.

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

A records search was conducted in June 2020 at the California Historical Resources Information System (CHRIS) South Central Coastal Information Center (SCCIC) located at the California State University, Fullerton as part of the CRA Report completed for the project site (Appendix B). The purpose of the records search was to identify all previous cultural resources work and previously recorded cultural resources within a 0.5-mile radius of the area of potential effect (APE). The search included a review of the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list. Search results identified 17 previously conducted cultural resources studies and 2 previously recorded cultural resources within a 0.5-mile radius of the APE, one of which is prehistoric (Appendix B); however, the CRA Report concluded that no previously recorded prehistoric or historic period archaeological resources are located at the site.

The project site is currently vacant and there are no historical properties on or adjacent to the site (Appendix B). Since implementation of the project would not result in the potential to cause a substantial adverse change in the significance of a historical resource, no impact would occur.

NO IMPACT

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

As discussed under impact discussion *a.* of this section, a cultural resources records search was conducted for the project site and the results identified 17 previously conducted cultural resources studies and two previously recorded cultural resources within a 0.5-mile radius of the APE, one of which is prehistoric (i.e., Prehistoric isolated chione shell) (Appendix B); however, the CRA Report concluded that no previously recorded prehistoric or historic period archaeological resources are located at the site. In addition to the CHRIS records search, a search of the Sacred Lands File at the NAHC returned negative results at the site.

As discussed in Section 18, *Tribal Cultural Resources*, the City of Santa Ana sent a Local Government Tribal Consultation List Request to the NAHC to obtain a list of Native American tribes with jurisdiction in the project area. The NAHC responded to the City's request on August 20, 2020 with a consultation list of 17 tribes to contact because of their traditional and cultural affiliation with the geographic area in which the project is located. Based on this list, and per PRC Section 21080.3.1, the City sent consultation request letters on August 26, 2020 to the 17 tribes and have since received responses from the Juaneño Band of Mission Indians, Acjachemen Nation - Belardes and Gabrieleño Band of Mission Indians - Kizh Nation, requesting consultation to discuss the project in further detail. Following these requests, a consultation phone call between Joyce Stanfield Perry, representative of the Acjachemen Nation – Belalrdes, and City staff occurred on October 13, 2020. Due to the shell finding within a 0.5-mile radius of the APE and site proximity to the Santa Ana River, the Acjachemen Nation – Belalrdes indicated the potential to encounter resources during ground-disturbing activities. Furthermore, a consultation phone call between Chairman Andrew Salas and Matthew Teutimez, representatives of the Kizh Nation, and City Staff on October 28, 2020 also indicated the potential to encounter unanticipated resources during ground-disturbing activities due to the site's history and proximity to the Santa Ana River.

As discussed in the CRA Report, due to high levels of disturbance and lack of indications of cultural resources, the potential for buried archaeological resources below the previously disturbed ground surface is low (Appendix B). While Native American consultation indicated that the site's proximity to the Santa Ana River increases the potential to encounter prehistoric cultural resources during ground-disturbing activities, the APE has experienced a high level of disturbance. Nevertheless, there is a potential that undiscovered archaeological resources may be uncovered and/or potentially damaged during ground-disturbing construction activities. With implementation of Mitigation Measures CR-1 and CR-2, all ground-disturbing construction work would be monitored by a qualified archaeologist and, in the event unanticipated archaeological resources are discovered, such work would halt and additional monitoring or consultation to adequately document the resource would follow. As discussed in Section 18, *Tribal Cultural Resources*, the project would also include Mitigation Measures TCR-1 and TCR-2 to minimize impacts to tribal cultural resources during construction. Residual impacts would be less than significant.

Mitigation Measures

CR-1 Archeological Resource Construction Monitoring

Prior to the issuance of a grading permit, the property owner/developer shall retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983) to be present during all initial subsurface ground-disturbing construction activities. At the commencement of construction activities, an orientation

meeting shall be conducted by the qualified archaeologist, construction manager, general contractor, subcontractor, and construction workers associated with ground-disturbing activities. The orientation meeting shall describe the potential of exposing archaeological resources, the types of resources that may be encountered, and directions on the steps that shall be taken if such a find is encountered.

CR-2 Unanticipated Discovery of Archaeological Resources

If archaeological resources are encountered during ground-disturbing activities, the construction manager shall immediately halt all work activities within 100 feet of the discovery and a qualified archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983) shall immediately evaluate the find. After cessation of ground-disturbing activities, the construction manager shall immediately contact the City's Planning and Building Agency. Work shall not resume until authorized by the Director/Manager (or his/her designee), and the qualified archaeologist.

If the qualified archaeologist determines that the discovery constitutes a significant resource under CEQA, preservation in place is the preferred manner of mitigation. In the event preservation in place is demonstrated to be infeasible, and data recovery is determined to be the only feasible mitigation option, a detailed Cultural Resources Treatment Plan shall be prepared and implemented by a qualified archaeologist in consultation with the City. The City shall consult with appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in origin. Archaeological materials recovered during any investigation shall be put into curation at an accredited facility.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

As discussed under impact discussion *b.* of this section, the site has been extensively disturbed from previous construction and demolition activities. In addition, per the field reconnaissance survey conducted as part of the CRA Report, there is no visible evidence of a human burial or formal cemetery activities at the project site. As such, the potential for intact human remains to be located at the site is unlikely. However, since ground-disturbing activities would occur in order to construct the project, the potential remains that previously undiscovered human remains may be disturbed.

If human remains are found during project construction, existing regulations outlined in the State of California Health and Safety Code Section 7050.5 state that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified within 24 hours of identification as human. If the human remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of being granted access and provide recommendations as to the treatment of the remains to the landowner.

Since there are existing regulatory requirements governing the protocols for unanticipated discovery of human remains, ensuring that human remains would not be disturbed and adequate procedures are followed if uncovered, this impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in a 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. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The proposed project would use nonrenewable resources for construction and operation of the project. Natural resources that would be utilized by the project include petroleum-based fuels for vehicles and equipment, operational building energy usage, and operational water consumption. The anticipated use of these resources is detailed in the following subsections. As supported by the discussion below, the proposed project would not create energy demand that would result in a significant environmental impact.

Construction Energy Demand

During project construction, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and vehicles used to deliver materials to the site. The project would require site preparation and grading, including hauling material off-site; pavement and asphalt installation; building construction; architectural coating; and landscaping and hardscaping. As shown in Table 7, project construction would require approximately 27,474 gallons of gasoline and approximately 188,862 gallons of diesel fuel. These construction energy estimates are conservative because they assume that the construction equipment used in each phase of construction is operating every day of construction.

Table 7 Estimated Fuel Consumption during Construction

	Fuel Consumption (gallons)	
Source	Gasoline	Diesel
Construction Equipment & Hauling Trips	–	188,862
Construction Worker Vehicle Trips	27,474	–

See Appendix A for energy calculation sheets.

Energy use during construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. In addition, construction contractors would be required to comply with the provisions of California Code of Regulations Title 13 Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes and would minimize unnecessary fuel consumption. Construction equipment would be subject to the USEPA Construction Equipment Fuel Efficiency Standard, which would also minimize inefficient, wasteful, or unnecessary fuel consumption. Furthermore, per applicable regulatory requirements such as 2019 CALGreen, the project would comply with construction waste management practices to divert a minimum of 65 percent of construction and demolition debris. These practices would result in efficient use of energy necessary to construct the project. In the interest of cost-efficiency, construction contractors also would not utilize fuel in a manner that is wasteful or unnecessary. Therefore, the project would not involve the inefficient, wasteful, and unnecessary use of energy during construction, and the construction-phase impact related to energy consumption would be less than significant.

Operational Energy Demand

Operation of the project would contribute to area energy demand by consuming electricity, natural gas, and gasoline and diesel fuel. Natural gas and electricity would be used for heating and cooling systems, lighting, appliances, water use, and the overall operation of the project. Gasoline and diesel consumption would be attributed to the trips generated by future residents. Table 8 summarizes estimated operational energy consumption for the proposed project. As shown therein, project operation would require approximately 71,977 gallons of gasoline and 18,090 gallons of diesel fuel for transportation fuels, 0.37-gigawatt hour (GWh) of electricity, and 1,085 million British thermal units (MMBtu[1]) of natural gas.

Table 8 Estimated Project Annual Transportation Energy Consumption

Source	Energy Consumption	
Transportation Fuels		
Gasoline	71,977 gallons	8,205 MMBtu
Diesel	18,090 gallons	2,352 MMBtu
Electricity	0.37 GWh	1,273 MMBtu
Natural Gas Usage	10,846 U.S. therms	1,085 MMBtu

See Appendix A for transportation energy calculation sheets and CalEEMod output results for electricity and natural gas usage.

The project would be required to comply with the 2019 CALGreen standards, which requires implementation of energy efficient light fixtures and building materials into the design of new construction projects. Furthermore, the 2019 Building Energy Efficiency Standards (California Building Code [CBC] Title 24, Part 6) requires newly constructed buildings to meet energy performance standards set by the California Energy Commission (CEC). These standards are specifically crafted for new buildings to result in energy efficient performance so that the buildings do not result in wasteful, inefficient, or unnecessary consumption of energy. The standards are updated every three years and each iteration is more energy efficient than the previous standards.

1 According to the United States Energy Information Administration (EIA), a British thermal unit (Btu) is a measure of the heat content of fuels or energy sources. It is the quantity of heat required to raise the temperature of one pound of liquid water by 1-degree Fahrenheit at the temperature that water has its greatest density (approximately 39 degrees Fahrenheit). In the United States, Btu is the most common unit for comparing energy sources or fuels (EIA 2020a; EIA 2020b).

Furthermore, the project would continue to reduce its use of nonrenewable energy resources as the electricity generated by renewable resources provided by Southern California Edison (SCE) continues to increase to comply with State requirements through Senate Bill (SB) 100, which requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

To help achieve Title 24 reduction targets, the project would include water and energy efficiency features. The project's water consumption would be minimized through the use of low-flow plumbing fixtures, centralized laundry facilities with water-conserving appliances, and use of drought-tolerant native and adaptive plants as part of the landscape design. Furthermore, related to energy production and usage, the project would include ENERGY-star appliances, and use of natural light for building interiors. Of the 136 parking spaces, an estimated seven spaces would be equipped with EV charging stations, with additional infrastructure to expand stations for increased demand in the future. In addition, the project would include 44 bicycle parking spaces. The project site is walking distance from three transit stop pairs serviced by the OCTA within 0.25-mile of the site: two located on Westminster Avenue and one on North Fairview Street. These features would incentivize the use of public transit, active transportation, and fuel-efficient vehicles for traveling to and from the project site.

Overall, construction of the project would be temporary and typical of similar projects, and would not result in the wasteful, inefficient, or unnecessary consumption of energy. Operation of the project would consume fuel, natural gas, and electricity; however, the project would conform to the latest version of California's Green Building Standards Code and Building Energy Efficiency Standards, and would therefore not lead to wasteful, inefficient, or unnecessary consumption of energy resources. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The project would be designed to comply with the performance levels of the latest version of the 2019 CALGreen, which would reduce energy consumption compared to standard building practices, and the energy standards in the 2019 Building Energy Efficiency Standards (CBC Title 24, Part 6). Measures to meet these energy standards may include low-flow plumbing fixtures, water-efficient irrigation systems, high-efficiency heating, ventilation, and air conditioning (HVAC) and hot water storage tank equipment, and lighting conservation features. Compliance with these regulations would minimize potential conflicts with adopted energy conservation plans. As discussed under impact discussion *a.* of this section, the project would include water and energy efficiency features. The project's water consumption would be minimized through the use of low-flow plumbing fixtures, centralized laundry facilities with water-conserving appliances, and use of drought-tolerant native and adaptive plants as part of the landscape design. Furthermore, related to energy production and usage, the project would include rooftop and solar arrays, ENERGY-star appliances, and use of natural light for building interiors. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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7 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:				
1. 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?	☐	☐	☐	■
2. Strong seismic ground shaking?	☐	☐	☐	■
3. Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
4. Landslides?	☐	☐	☐	■
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c. 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?	☐	☐	■	☐
d. Be located on expansive soil, as defined in Table 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 wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐

A project-specific Preliminary Geotechnical Investigation & Percolation/Infiltration Rate Study (Geotechnical Study) was prepared by P.A. & Associates, Inc., dated May 2019, and included as Appendix C. The discussion herein, pertaining to CEQA Guidelines criteria for geology and soils, is largely based on the Geotechnical Study and additional cited sources.

a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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?

a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

The project site is not located in an Alquist-Priolo Earthquake Fault Zone (Appendix C). The project site, like much of the Southern California region, may experience moderate to potentially severe ground shaking from earthquakes generated on known faults within 60 miles (approximately 100 kilometers) of the project site, such as the Newport-Inglewood and the San Andreas Faults. There are no active faults known to existing within or in the immediate vicinity of the project site. The potential for fault rupture on the project site is low, and the project would not cause direct or indirect adverse effects resulting from fault ruptures or seismic activities.

Furthermore, proposed structures would be constructed to comply with the seismic design criteria of the CBC. Although structures may be damaged during earthquakes, adherence to the seismic design requirements would minimize property and structural damage. The CBC is intended to provide minimum requirements to prevent major structural failure and loss of life in seismic events. Therefore, the project would result in no impact.

NO IMPACT

a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

The project site, and much of the City of Santa Ana, is within an area with liquefaction potential (Appendix C). The Geotechnical Study evaluated the site-specific liquefaction potential based on project site soil samples, and determined that the maximum total liquefaction-induced ground settlement at the project site would be about 1.4 inches during modeled earthquake scenarios, and that the potential for liquefaction at the project site is low to moderate and would not adversely impact project construction activities.

Furthermore, the City's Draft General Plan Update PEIR states that compliance with applicable seismic design standards found in the CBC would reduce the impact of liquefaction and seismic settlement to a less than significant impact level (Santa Ana 2020a). In addition, the City's 2010 General Plan Seismic Safety Element includes a citywide policy to "use a higher standard of design for structures with high occupancy" and a program to "enforce seismic design provisions of the Uniform Building Code" in order to minimize seismic risks for new construction (Santa Ana 2010). As stated above in the discussion provided for criteria 'a.1' and 'a.2,' proposed structures would be constructed to comply with the seismic design criteria of the CBC. Therefore, the project would result in a less than significant impact.

LESS THAN SIGNIFICANT IMPACT

a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

The project site is relatively flat, located at approximately 95 feet above mean sea level (Appendix D). There are no steep slopes or major topographic reliefs on the project site or vicinity; the project site has no potential for landslides. Therefore, the project would result in no impact.

NO IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

The project site was previously developed with residential, retail, and commercial uses and has remained vacant since 2015 (Appendix D). The project site shows signs of previous disturbance and little, if any, native topsoil is likely to be present as a result.

The project has the potential to expose surface soils to wind and water erosion during construction activities, though such soil movement may be limited since the project site is relatively flat. Wind erosion impacts would be minimized through soil stabilization measures required by SCAQMD Rule 403, which include best management practices (BMPs) such as daily watering.

Furthermore, all new developments are subject to regional and local regulations pertaining to construction activities. Development greater than one acre in size is required to comply with the provisions of the General Construction Activity Stormwater Permit adopted by the State Water Resources Control Board (SWRCB), which would require the employment of BMPs to limit the extent of eroded materials from a construction site. To implement the project, a grading permit and Erosion Control Plan would be required. Compliance with CBC Chapter 70 standards and City requirements for a grading permit would reduce soil erosion impacts to a less than significant level. Once construction is complete, the project site would be covered by paving, landscaping, and buildings; no areas of the project site would contain exposed native soils other than landscaping. Therefore, the project would result in a less than significant impact.

LESS THAN SIGNIFICANT IMPACT

c. Would the project 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?

Based on soil borings and samples collected on the project site, the geologic units encountered on the site generally consisted of sands to an approximate depth of 13 feet and clays below to more than 30 feet (Appendix C). As stated above in the discussion provided for criteria ‘a.3,’ site-specific liquefaction potential is low to moderate. As stated above in the discussion provided for criteria ‘a.4,’ the project site and vicinity are relatively flat and landslide potentials are very low. The potential for geologic collapse on the project site is also low, due to the flat topography of the project site and vicinity.

Lateral spreading of the ground surface during seismic events usually occurs in areas with moderate to high liquefaction potential and generally takes place toward a free face such as a channel, and to a lesser extent on ground surfaces with very gentle slope. The Santa Ana River is located approximately 780 feet east of the project site in a concrete flood channel. Both street-level sides of the Santa Ana River channel are completely developed with commercial, residential, and recreational uses. There are no open spaces between the project site and the Santa Ana River that would result in lateral spreading. Furthermore, proposed buildings would be constructed according

to CBC seismic design standards to reduce earthquake impact. Therefore, the project would result in a less than significant impact.

LESS THAN SIGNIFICANT IMPACT

d. Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Soil samples collected from the project site were tested for expansion potential and were determined to have very low expansion potential (Appendix C). Therefore, the project would result in no impact.

NO IMPACT

e. Would the project 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?

The City of Santa Ana and the project site are served by a sanitary sewer system provided by the City's Public Works Department (Santa Ana 2016). The project would connect to existing sewer and wastewater systems and would not require the use of septic tanks. Therefore, the project would result in no impact.

NO IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

According to the City's 2010 General Plan Conservation Element, the following goal and objective pertain to paleontological resources (Santa Ana 2010):

Goal 3.0 **Preserve and enhance the aesthetic and environmental quality of the community for the enjoyment of all residents.**

Objective 3.1	Minimize loss of natural aesthetic, historic, archaeological, and paleontological resources and land is developed.
Program	*Inventory existing historic, archaeological, paleontological, and cultural sites and districts.*

In accordance with Goal 3.0, Objective 3.1, and program listed above, a Paleontological Existing Conditions Technical Report (Technical Report) was prepared by SWCA Environmental Consultants, dated April 2020, as part of the City's Draft General Plan Update effort (which has not yet been adopted). Findings of the Technical Report were summarized in the City's Draft General Plan Update PEIR (Santa Ana 2020a). According to the PEIR Figure 5.6-3, *Paleontological Sensitivity*, the project site is within a region that has low to high sensitivities for paleontological resources which increase with depth.

The project site was previously developed for residential, retail, and commercial use (Appendix D). The project site is vacant with signs of previous disturbance. The project site is underlain by Quaternary young alluvia fan deposits (i.e., Qyf_a and Qyf_{sa}), which have low- to-high sensitivities for paleontological resources. The native alluvium present on the project site was encountered at depths between 0 and 9.5 feet in the form of poorly graded, moist and medium dense sand,

overlying clays and sands below 13 feet (Appendix D). The alluvial sands in boring samples collected on the project site were wet or saturated below approximately 22.5 feet.

Ground-disturbing activities during project construction may impact previously unknown paleontological resources that may be present below the project site surface. Therefore, construction of the project could result in direct or indirect impacts to paleontological resources that could potentially be significant.

Implementation of Mitigation Measure GEO-1 would require a paleontological resources mitigation and monitoring program, Worker Environmental Awareness Program, and a resource recovery and management plan to reduce impacts to paleontological resources to a less than significant level.

GEO-1 Paleontological Resources Management Program

The following mitigation measures shall only be implemented during ground construction activities (i.e., grading, trenching, foundation work, excavations) where ground disturbance exceeds nine feet below ground surface within project areas underlain by Quaternary young alluvial fan deposits.

1. **Mitigation and Monitoring Program.** The Paleontological Mitigation and Monitoring Program shall be supervised by a qualified paleontologist. A qualified paleontologist is an individual who meets the education and professional experience standards as set forth by the SVP (2010), which recommends the paleontologist shall have at least a Master's Degree or equivalent work experience in paleontology, shall have knowledge of California geology and local paleontology, shall be familiar with paleontological procedures and techniques, and who has worked as a paleontological mitigation project supervisor for a least one year. Monitoring shall be conducted by a qualified paleontological monitor, who is defined as an individual who has experience with collection and salvage of paleontological resources.
2. **Paleontological Worker Environmental Awareness Program (WEAP).** Prior to the start of construction, the Qualified Paleontologist or his or her designee, shall conduct training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff. The WEAP shall be fulfilled at the time of a preconstruction meeting. In the event a fossil is discovered by construction personnel anywhere in the project area, all work in the immediate vicinity of the find shall cease and a qualified paleontologist shall be contacted to evaluate the find before re-starting work in the area. If it is determined that the fossil(s) is (are) scientifically significant, the qualified paleontologist shall complete the mitigation outlined below to mitigate impacts to significant fossil resources.
3. **Resource Recovery and Management Plan.** Ground-disturbing activity that does not exceed nine feet in depth in areas of low paleontological sensitivity shall not require paleontological monitoring. Any excavations within undisturbed bedrock in areas of high paleontological sensitivity (i.e., Pleistocene-aged deposits), and excavations that exceed nine feet in depth in those areas potentially underlain by Pleistocene-aged deposits (i.e., Holocene-aged alluvial sediments) that exceed nine feet in depth shall be monitored on a full-time basis by a qualified paleontological monitor. If no fossils are observed during the first 50 percent of excavations in Holocene-aged sediments exceeding nine feet in depth, or if the qualified paleontologists can determine that excavations below nine feet are not disturbing Pleistocene-aged (or other potentially fossil-containing) sediments, then paleontological monitoring can be discontinued or reduced to spot-checking under the discretion of the qualified paleontologist, subject to approval from Orange County.

If fossils are discovered, the qualified paleontologist (or paleontological monitor) shall recover them. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. Should larger fossils be discovered, the qualified paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.

Once salvaged, fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection (such as the University of California Museum of Paleontology or other institution determined by the City of Santa Ana or Orange County), along with all pertinent field notes, photos, data, and maps.

Upon completion of ground-disturbing activities (and curation of fossils if necessary), the qualified paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.

With implementation of Mitigation Measure GEO-1, project impacts to paleontological resources would be less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

8 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?	☐	☐	■	☐

Overview of Climate Change and Greenhouse Gases

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons and perfluorocarbons, and sulfur hexafluoride. Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, and CH_4 results from off-gassing associated with agricultural practices and landfills. Different types of GHGs have varying global warming potentials (GWPs), which are the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the GHG emissions, referred to as carbon dioxide equivalent (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. CO_2 has a 100-year GWP of one. By contrast, CH_4 has a GWP of 28, meaning its global warming effect is 28 times greater than that of CO_2 on a molecule per molecule basis (Intergovernmental Panel on Climate Change [IPCC] 2014a).[2]

The accumulation of GHGs in the atmosphere regulates Earth's temperature. Without the natural heat-trapping effect of GHGs, the Earth's surface would be about 33 degrees Celsius (°C) cooler (World Meteorological Organization 2020). However, emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of GHGs in the atmosphere beyond the level of naturally occurring concentrations.

[2] The IPCC's (2014a) *Fifth Assessment Report* determined that methane has a GWP of 28. However, modeling of GHG emissions was completed using the California Emissions Estimator Model version 2016.3.2, which uses a GWP of 25 for methane, consistent with the IPCC's (2007) *Fourth Assessment Report*.

Greenhouse Gas Emissions Inventory

Worldwide anthropogenic emissions of GHGs were approximately 46,000 million metric tons (MMT) of CO_2e in 2010. CO_2 emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010 (IPCC 2014b).

Total United States GHG emissions were 6,676.6 MMT of CO_2e in 2018. Emissions increased by 2.9 percent from 2017 to 2018, and since 1990, total U.S. emissions have increased by an average annual rate of 0.13 percent for a total increase of 3.7 percent between 1990 and 2018. In 2018, the transportation and industrial end-use sectors accounted for 36 percent and 26 percent, respectively, of nationwide GHG emissions while the residential and commercial end-use sectors accounted for 20 percent and 17 percent of nationwide GHG emissions, respectively, with electricity emissions distributed among the various sectors (USEPA 2020).

Based on the CARB's California Greenhouse Gas Inventory for 2000-2017, California produced 424.1 MMT of CO_2e in 2017. The major source of GHG emissions in California is the transportation sector, which comprises 41 percent of the state's total GHG emissions. The industrial sector is the second largest source, comprising 24 percent of the state's GHG emissions while electric power accounts for approximately 15 percent (CARB 2019).

Regulatory Setting

California Regulations

The State of California considers GHG emissions and the impacts of climate change to be a serious threat to the public health, environment, economic well-being, and natural resources of California, and has taken an aggressive stance to mitigate its impact on climate change through the adoption of policies and legislation. CARB is responsible for the coordination and oversight of state and local air pollution control programs in the state. California has numerous regulations aimed at reducing the State's GHG emissions; some of the major initiatives are summarized below.

CALIFORNIA GLOBAL WARMING SOLUTIONS ACT OF 2006 (ASSEMBLY BILL 32 AND SENATE BILL 32)

The "California Global Warming Solutions Act of 2006," (Assembly Bill [AB] 32), outlines California's major legislative initiative for reducing GHG emissions. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHG emissions to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 target of 431 MMT of CO_2e, which was achieved in 2016. CARB approved the Scoping Plan on December 11, 2008, which included GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others (CARB 2008). Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Cars standards, and Cap-and-Trade) have been adopted since the Scoping Plan's approval.

The CARB approved the 2013 Scoping Plan update in May 2014. The update defined the CARB's climate change priorities for the next five years, set the groundwork to reach post-2020 statewide goals, and highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State's longer term GHG reduction strategies with other state policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

On September 8, 2016, the governor signed Senate Bill (SB) 32 into law, extending the California Global Warming Solutions Act of 2006 by requiring the state to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation, such as SB 1383 (discussed later). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of six metric tons (MT) of CO_2e by 2030 and two MT of CO_2e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, sub-regional, or regional level), but not for specific individual projects because they include all emissions sectors in the state (CARB 2017).

SENATE BILL 375

SB 375, signed in August 2008, enhances the State's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. SCAG was assigned targets of an 8 percent reduction in GHGs from transportation sources by 2020 and a 19 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

Regional Regulations

2020-2045 SCAG RTP/SCS

On May 7, 2020, SCAG's Regional Council adopted the 2020-2045 RTP/SCS (titled Connect SoCal) for federal transportation conformity purposes and considered approval of the full plan and for all other purposes within 120 days of this date. Following initial adoption, SCAG formally adopted the 2020-2045 RTP/SCS on September 3, 2020 to provide a roadmap for sensible ways to expand transportation options, improve air quality and bolster Southern California's long-term economic viability. The 2020-2045 RTP/SCS builds upon the progress made through implementation of the 2016-2040 RTP/SCS and includes ten goals focused on promoting economic prosperity, improving mobility, protecting the environment, and supporting healthy/complete communities. The SCS implementation strategies include focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, and supporting implementation of sustainability policies. The SCS establishes a land use vision of center-focused placemaking, concentrating growth in and near Priority Growth Areas, transferring of development rights, urban greening, creating greenbelts and community separators, and implementing regional advance mitigation (SCAG 2020b).

Local Regulations

CLIMATE ACTION PLAN

The City of Santa Ana adopted a Climate Action Plan (CAP) in December 2015 (Santa Ana 2015). The CAP represents the City's commitment to improving quality of life by reducing carbon pollution and energy use from municipal operations and from the community as a whole. To develop the CAP, an emissions inventory was conducted to determine baseline GHG emissions from the community and from municipal operations for the calendar year 2008.

In 2014, the City Council adopted emissions reduction goals for the CAP. For community-wide emissions, the reduction goal is 15 percent below the baseline year 2008 by 2020 and 30 percent below the baseline year 2008 by 2035. For municipal operations emissions, the reduction goal is 30 percent by 2020 and 40 percent by 2035. Based on community input, suggestions from City staff, analysis of other communities' climate action plans, and consultant recommendations, a list of measures to reduce emissions was developed. These measures address emissions in five sectors: transportation and land use, energy, solid waste, water, and wastewater (Santa Ana 2015). Per the requirements of CEQA 15183.5(b), the CAP is considered a qualified GHG reduction plan.

Methodology

GHG emissions associated with the proposed project were calculated using CalEEMod version 2016.3.2 (Appendix A). The construction schedule and construction equipment list were based on project information provided by the applicant. It is assumed that all construction equipment used would be diesel-powered. In accordance with SCAQMD guidance, construction emissions were amortized over a period of 30 years (the assumed life of the project) and amortized construction emissions were added to operational emissions so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies (SCAQMD 2008b).

Because the project would be operational post-2020, project emissions were modeled for year 2030 in accordance with the State's next milestone GHG reduction target for 2030 per SB 32. CalEEMod calculates operational emissions of CO_2, CH_4, and N_2O associated with energy use, area sources, waste generation, water use and conveyance as well as CO_2 and CH_4 emissions associated with mobile sources. The default electricity consumption values in CalEEMod include the CEC-sponsored California Commercial End Use Survey and Residential Appliance Saturation Survey studies. CalEEMod currently incorporates California's 2016 Title 24 building energy efficiency standards; however, the project would be subject to at least the 2019 Title 24 standards.

The project would be served by SCE. Therefore, SCE's energy intensity factors (i.e., the amount of CO_2, CH_4, and N_2O per kilowatt-hour) were used to calculate GHG emissions. The default SCE energy intensity factors included in CalEEMod are based on data from 2012. As of 2012, SCE procured 20.6 percent of its electricity from renewable sources (SCE 2012); however, per SB 100, the statewide Renewables Portfolio Standard (RPS) program requires electricity providers to increase procurement from eligible renewable energy sources to 33 percent by 2020 and 60 percent by 2030. To account for the continuing effects of the RPS, the energy intensity factors included in CalEEMod were reduced based on the percentage of renewables reported by SCE. SCE energy intensity factors that include this reduction are shown in Table 9.

Table 9 SCE Energy Intensity Factors

	2012 (lbs/MWh)	2030 (lbs/MWh)[2]
Percent procurement	20.6%[1]	60%
Carbon dioxide (CO_2)	702.4	353.87
Methane (CH_4)	0.029	0.015
Nitrous oxide (N_2O)	0.006	0.003

lbs/day: pounds per day; MWh: megawatt hour

[1] Source: SCE 2012

[2] RPS goal established by SB 100

GHG emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for northern and southern California. A 20 percent reduction in indoor potable water use was incorporated in the model in accordance with CALGreen standards. In addition, the project would include water efficient landscape irrigation, which was included in the CalEEMod model.

Mobile source emissions are generated by the increase in vehicle trips to and from the project site associated with operation of on-site development. As discussed in Section 17, *Transportation*, a TIA was prepared for the project, which determined that the project would result in an increase of 462 daily trips (Appendix E). The estimated trip generation for the proposed project were included in CalEEMod. CalEEMod calculates emissions of CO_2 and CH_4 generated by project-generated vehicle trips (i.e., mobile sources). However, CalEEMod does not calculate N_2O emissions from mobile sources; therefore, N_2O emissions were quantified separately using guidance from CARB (Appendix A).

Significance Thresholds

The majority of individual projects do not generate sufficient GHG emissions to create significant project-specific environmental effects. However, the environmental effects of a project's GHG emissions can contribute incrementally to cumulative environmental effects that are significant, contributing to climate change, even if an individual project's environmental effects are limited (CEQA Guidelines Section 15064[h][1]). The issue of a project's environmental effects and contribution towards climate change typically involves an analysis of whether or not a project's contribution towards climate change is cumulatively considerable. Cumulatively considerable means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines Section 15064[h][1]).

In late 2015, the California Supreme Court's Newhall Ranch decision confirmed that there are multiple potential pathways for evaluating GHG emissions consistent with CEQA, depending on the circumstances of a given project (*Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal. 4th 204). Given the legislative attention and judicial action regarding post-2020 goals and the scientific evidence that additional GHG reductions are needed through the year 2050, the Association of Environmental Professionals' (AEP) Climate Change Committee published a white paper in October 2016 to provide guidance on defensible GHG thresholds for use in CEQA analyses and GHG reduction targets in climate action plans in light of the change in focus on the 2030 reduction target and questions raised in the Newhall Ranch case (AEP 2016).

The AEP Climate Change Committee white paper identified seven thresholds for operational emissions. The following four methods described are the most widely used evaluation criteria:

1. **Consistency with a Qualified GHG Reduction Plan.** For a project located within a jurisdiction that has adopted a qualified GHG reduction plan (as defined by CEQA Guidelines Section 15183.5), GHG emissions would be less than significant if the project is anticipated by the plan and fully consistent with the plan. However, projects with a horizon year beyond 2020 should not tier from a plan that is qualified up to 2020.
2. **Bright Line Thresholds.** There are two types of bright line thresholds:
    a. **Standalone Threshold.** Emissions exceeding standalone thresholds would be considered significant.
    b. **Screening Thresholds.** Emissions exceeding screening thresholds would require evaluation using a second-tier threshold, such as an efficiency threshold or other threshold concept, to determine whether project emissions would be considered significant. However, projects with a horizon year beyond 2020 should take into account the type and amount of land use projects and their expected emissions out to year 2030.
3. **Efficiency Thresholds.** Most land use sector efficiency thresholds are currently based on AB 32 targets and should not be used for projects with a horizon year beyond 2020. Projects with a horizon year beyond 2020 should use efficiency metrics that are adjusted for 2030 and include applicable land uses.
4. **Percent Below "Business as Usual" (BAU).** GHG emissions would be less than significant if the project reduces BAU emissions by the same amount as the statewide 2020 reductions. However, this method is no longer recommended following the Newhall Ranch ruling (AEP 2016).

As the project would have a horizon year post-2020, an efficiency threshold (3) is the most appropriate threshold for assessing operational GHG emissions. Efficiency thresholds are quantitative thresholds based on a measurement of GHG efficiency for a given project, regardless of the amount of mass emissions. These thresholds identify the emission level below which new development would not interfere with attainment of statewide GHG reduction targets. A project that attains such an efficiency target, with or without mitigation, would result in less than significant GHG emissions. A locally appropriate 2030 project-specific threshold is derived from CARB's recommendations in the 2017 Climate Change Scoping Plan Update, as discussed below.

With the release of the 2017 Climate Change Scoping Plan Update, CARB recognized the need to balance population growth with emissions reductions and in doing so, provided a new local plan level methodology for target setting that provides consistency with state GHG reduction goals using per capita efficiency thresholds. A project-specific efficiency threshold can be calculated by dividing statewide GHG emissions by the sum of statewide jobs and residents. However, not all statewide emission sources would be impacted by the proposed land use (e.g., agriculture and industrial). Accordingly, consistent with the concerns raised in the Golden Door (2018) and Newhall Ranch (2015) decisions regarding the correlation between state and local conditions, the 2030 statewide inventory target was modified with substantial evidence provided to establish a locally-appropriate, evidence-based, residential project-specific threshold consistent with the SB 32 target.

To develop this threshold, the local planning area was first evaluated to determine emissions sectors that are present and would be directly affected by potential land-use changes. A description

of major sources of emissions that are included in the State Scoping Plan emissions sectors and representative sources in Santa Ana are shown in Table 10.

According to the City's 2010 General Plan Land Use Element, there are no vacant agricultural-designated land uses in the city. Therefore, the Agricultural Emissions Sector was considered locally inappropriate and was removed from the State 2030 emissions forecast. Industrial uses in the city comprise approximately 14 percent of existing land uses and include a mix of light and heavy product manufacturing and assembly, and commercial uses that are ancillary to industrial uses (Santa Ana 2010). Industrial Sector source emissions (i.e., oil, gas, and hydrogen production; refineries; general fuel use; and mining operations) are not found or operational within the city and would not be directly impacted by the proposed land uses; therefore the Industrial Emissions Sector was removed from the State 2030 emissions forecast to retain a more conservative locally-appropriate target. Additionally, Cap and Trade emissions reductions occur independent of any local jurisdictional land use decisions and were also excluded from the locally appropriate target.

After removing Agricultural, Industrial, and Cap and Trade emissions, the remaining emissions sectors with sources within the Santa Ana planning area were then summed to create a locally appropriate emissions total for projects in Santa Ana. This locally-appropriate emissions total is divided by the statewide 2030 service person population to determine a locally-appropriate, project-level threshold of 3.2 MT of CO_2e per service population that is consistent with SB 32 targets, as shown in Table 10 and Table 11.

Table 10 SB 32 Scoping Plan Emissions Sector Targets

GHG Emissions Sector[1]	2030 State Emissions Target (MMT)[1]	Locally Appropriate[2]	Project Specific	Major Sources[3]
Residential and Commercial	38	Yes	Yes	Natural gas end uses, including space and water heating of buildings
Electric Power	53	Yes	Yes	Electricity uses, including lighting, appliances, machinery and heating
High GWP	11	Yes	Yes	SF_6 from power stations, HFCs from refrigerants and air conditioning[4]
Recycling and Waste	8	Yes	Yes	Waste generated by residential, commercial, and other facilities
Transportation	103	Yes	Yes	Passenger, heavy duty, and other vehicle emissions
Industrial	83	No	No	Oil, gas, and hydrogen production, refineries, general fuel use, and mining operations do not occur substantially within the city and would not apply to the project
Agriculture	24	No	No	Enteric fermentation, crop residue burning, and manure management do not occur substantially within the city and would not apply to the project
Cap and Trade Reductions	-60	No	No	Reductions from facilities emitting more than 10,000 MT CO_2e per year[6]
Scoping Plan Target (All Sectors)	**260**	**No**	**No**	**All emissions sectors**
Locally Inapplicable Sector (Industrial)	-83	No	No	Oil, gas, and hydrogen production, refineries, general fuel use, and mining operations[5]
Locally Inapplicable Sector (Agriculture)	-24	No	No	Enteric fermentation, crop residue burning, and manure management
Locally Inapplicable Sector (Cap and Trade)	60	No	No	Reductions from facilities emitting more than 10,000 MT CO_2e per year[6]
2030 Locally Applicable Emissions Sectors	**213**	**Yes**	**Yes**	**Emissions applicable to the local planning area**

MMT = million metric tons

[1] All State targets in MMT CO_2e. See the 2017 Climate Change Scoping Plan, page 31 for sector details (CARB 2017).

[2] Locally appropriate is defined as having significant emissions in Scoping Plan Categorization categories within the planning area.

[3] See CARB GHG Emissions Inventory Scoping Plan Categorization for details, available at: https://www.arb.ca.gov/cc/inventory/data/data.htm

[4] SF_6 is used primarily as an insulator in electrical substations while HFCs can be found in many residential and commercial refrigeration and air conditioning units. HFCs are in the process of being phased out through 2036 in most developed countries.

[5] The majority of this sector is not applicable to the local planning area, and any potential applicable subsectors cannot be disaggregated due to CARB accounting methods. Therefore, the entire sector has been removed to ensure a more conservative target.

[6] Cap and Trade is excluded as reductions will occur independent of local project land use decisions and are therefore not locally appropriate.

Table 11 SB 32 Locally Appropriate Project-Specific Threshold

California 2017 Climate Change Scoping Plan	California 2030 Population (persons)[1]	43,939,250
	California 2030 Employment Projection (persons)[2]	23,459,500
	Service Population (persons)	67,398,750
Locally Appropriate 2030 Project Threshold	2030 Locally Appropriate Emissions Sectors (MT of CO_2e)	213,000,000
	2030 Service Population (persons)	67,398,750
	2030 Service Person Target (MT of CO_2e per Service Person)	3.2[2]

[1] California Department of Finance 2019

[2] Average of employment range projections under implementation scenario. See CARB 2017 Climate Change Scoping Plan Update, page 55 (CARB 2017).

[3]Total of 3.16 has been rounded up per Scoping Plan general methodology. Lead agencies may determine this threshold as they deem appropriate.

At this time, the State has codified a target of reducing emissions to 40 percent below 1990 emissions levels by 2030 (SB 32) and has developed the 2017 Scoping Plan to demonstrate how the State will achieve the 2030 target and make substantial progress toward the 2050 goal of an 80 percent reduction in 1990 GHG emission levels set by EO S-3-05. In the recently signed EO B-55-18, which identifies a new goal of carbon neutrality by 2045 and supersedes the goal established by EO S-3-05, CARB has been tasked with including a pathway toward the EO B-55-18 carbon neutrality goal in the next Scoping Plan update.

While State and regional regulators of energy and transportation systems, along with the State's Cap and Trade program, are designed to be set at limits to achieve most of the reductions needed to hit the State's long-term targets, local governments can do their fair share toward meeting the State's targets by siting and approving projects that accommodate planned population growth and projects that are GHG-efficient. The AEP Climate Change Committee recommends that CEQA GHG analyses evaluate project emissions in light of the trajectory of state climate change legislation and assess their "substantial progress" toward achieving long-term reduction targets identified in available plans, legislation, or EOs (AEP 2016). Consistent with AEP Climate Change Committee recommendations, GHG impacts are analyzed in terms of whether the anticipated project development would impede "substantial progress" toward meeting the reduction goal identified in SB 32 and EO B-55-18. As SB 32 is considered an interim target toward meeting the 2045 State goal, consistency with SB 32 would be considered contributing substantial progress toward meeting the State's long-term 2045 goals. Avoiding interference with, and making substantial progress toward, these long-term State targets is important because these targets have been set at levels that achieve California's fair share of international emissions reduction targets that will stabilize global climate change effects.

Service Population

The project would involve development of 85 residential units and, as discussed in Section 14, *Population and Housing*, would result in an estimated population increase of 366 residents.

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Project construction is assumed to occur over a period of approximately 22 months, and the project is assumed to become operational in 2024. Based on CalEEMod modeling results, construction activities for the project would generate an approximately 1,920 MT of CO_2e (Table 12). Amortized over a 30-year period (the assumed life of the project per SCAQMD guidance), project construction would generate about 64 MT of CO_2e per year.

Table 12 Estimated Construction GHG Emissions

Project Emissions (MT/yr CO_2e)	
2021	374
2022	1,062
2023	484
Total	**1,920**
Total Amortized over 30 Years	64

See Appendix A for CalEEMod worksheets.

Table 12 summarizes the project's combined construction and operational GHG emissions. Once construction activities are complete, the source of GHG emissions associated with the project would be mainly from energy consumption and mobile sources (i.e., vehicle trips). A breakdown of emissions by source type is available in the CalEEMod modeling worksheets in Appendix A.

Table 13 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions (MT of CO_2e)
Construction	64
Operation	
Area	2
Energy	118
Solid Waste	20
Water	22
Mobile	
CO_2 and CH_4	570
N_2O	12
Project Annual Emissions	**808**
Service Population (Residents)	366
Emissions per Service Population (MT CO_2e/SP/year)	**2.2**
Project-Specific Efficiency Threshold (MT CO_2e/SP/year)	**3.2**
Exceed Project-Specific Threshold?	**No**

See Appendix A for CalEEMod worksheets.

As shown in Table 13, the proposed project would result in 808 MT of CO_2e per year, or 2.2 MT of CO_2e per service population per year, which would not exceed the project specific threshold of 3.2 MT CO_2e per service population per year. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As discussed under *Regulatory Setting*, plans and policies have been adopted to reduce GHG emissions in the Southern California region, including the State's 2017 Scoping Plan, SCAG's 2020-2045 RTP/SCS, and local policies contained in the City's CAP. The proposed project's consistency with these plans is discussed in the following subsections. As discussed therein, the proposed project would not conflict with plans and policies aimed at reducing GHG emissions.

2017 Scoping Plan

The principal state plan and policy is AB 32, the California Global Warming Solutions Act of 2006, and the follow up, SB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020 and the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030.

Pursuant to the SB 32 goal, the 2017 Scoping Plan was created to outline goals and measures for the state to achieve the reductions. The 2017 Scoping Plan's goals include reducing fossil fuel use and energy demand and maximizing recycling and diversion from landfills. The project would be consistent with these goals through project design, which includes complying with the latest Title 24 Green Building Code and Building Efficiency Energy Standards and installing energy-efficient light-emitting diode (LED) lighting, water-efficient faucets and toilets, water efficient landscaping and irrigation, and EV charging parking spaces. The project's water consumption would be minimized through the use of low-flow plumbing fixtures, centralized laundry facilities with water-conserving appliances, and use of drought-tolerant native and adaptive plants as part of the landscape design. Furthermore, related to energy production and usage, the project would include rooftop solar arrays, ENERGY-star appliances, and use of natural light for building interiors. Therefore, the project would be consistent with the 2017 Scoping Plan.

SCAG 2020-2045 RTP/SCS

The SCAG's 2020-2045 RTP/SCS is forecast to help California reach its GHG reduction goals. According to the 2020-2045 RTP/SCS, the updated targets for the SCAG region are 8 percent below 2005 per capita emission levels by 2020 (this value is unchanged from the previous 2020 CARB target) and 19 percent below 2005 per capita emissions levels by 2035. The revised 2035 target is higher than the previous CARB target of 13 percent for the SCAG region. The 2020-2045 RTP/SCS includes implementation strategies for focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, supporting implementation of sustainability policies, and promoting a green region. The project's consistency with the 2020-2045 RTP/SCS is discussed in Table 14. As shown therein, the proposed project would be consistent with the GHG emission reduction strategies contained in the 2020-2045 RTP/SCS.

Table 14 Project Consistency with Applicable SCAG 2020-2045 RTP/SCS Strategies

Reduction Strategy	Project Consistency
Focus Growth Near Destinations & Mobility Options. ▪ Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations ▪ Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets ▪ Plan for growth near transit investments and support implementation of first/last mile strategies. ▪ Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses ▪ Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods ▪ Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations) ▪ Identify ways to "right size" parking requirements and promote alternative parking strategies (e.g. shared parking or smart parking)	**Consistent**. The proposed project is an infill development that would replace the vacant, underutilized lot. The proposed project would be within walking and biking distance of existing residential, commercial, and recreational uses and would provide 44 bicycle parking spaces on the site. The project would also provide a children's playground on-site, which would reduce the number of trips to off-site recreational uses. In addition, the project site is walking distance from three transit stop pairs serviced by the OCTA within 0.25-mile of the site: two located on Westminster Avenue and one on North Fairview Street. These features would incentivize the use of public transit, active transportation, and fuel-efficient vehicles for traveling to and from the site. Therefore, the proposed project would focus growth near destinations and mobility options.

Reduction Strategy	Project Consistency
Promote Diverse Housing Choices. ▪ Preserve and rehabilitate affordable housing and prevent displacement ▪ Identify funding opportunities for new workforce and affordable housing development ▪ Create incentives and reduce regulatory barriers for building context-sensitive accessory dwelling units to increase housing supply ▪ Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions	**Consistent.** The project is an infill development that would involve construction of 85 apartment units, where all units, (except the manager's unit) would be designated as affordable housing units.
Leverage Technology Innovations. ▪ Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space ▪ Improve access to services through technology—such as telework and telemedicine as well as other incentives such as a "mobility wallet," an app-based system for storing transit and other multi-modal payments ▪ Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation	**Consistent.** Related to energy production and usage, the project would include rooftop solar arrays, ENERGY-star appliances, and use of natural light for building interiors. Of the 136 parking spaces, five percent (or seven spaces) would be equipped with EV charging stations, with additional infrastructure to expand stations for increased demand in the future.
Support Implementation of Sustainability Policies. ▪ Pursue funding opportunities to support local sustainable development implementation projects that reduce GHG emissions ▪ Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations ▪ Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable infrastructure and development projects, including parks and open space ▪ Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies ▪ Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region ▪ Continue to support long range planning efforts by local jurisdictions ▪ Provide educational opportunities to local decision makers and staff on new tools, best practices and policies related to implementing the Sustainable Communities Strategy	**Consistent.** The project would be consistent with the City of Santa Ana CAP (see Table 13), Title 24, and the latest CALGreen requirements. The project's water consumption would be minimized through the use of low-flow plumbing fixtures, centralized laundry facilities with water-conserving appliances, and use of drought-tolerant native and adaptive plants as part of the landscape design. Furthermore, related to energy production and usage, the project would include rooftop solar arrays, ENERGY-star appliances, and use of natural light for building interiors. Therefore, the project would support implementation of sustainability policies.

Reduction Strategy	Project Consistency
Promote a Green Region. ▪ Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards ▪ Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration ▪ Integrate local food production into the regional landscape ▪ Promote more resource efficient development focused on conservation, recycling and reclamation ▪ Preserve, enhance and restore regional wildlife connectivity ▪ Reduce consumption of resource areas, including agricultural land ▪ Identify ways to improve access to public park space	**Consistent**. The project is an infill development that would involve construction of 85 apartment units and associated parking and would therefore not interfere with regional wildlife connectivity or convert agricultural land. The project would comply with the Santa Ana CAP (see Table 13), Title 24, and CALGreen. In addition, the project would include a public children's playground. Therefore, the project would support development of a green region.

Source: SCAG 2020

Climate Action Plan

The City of Santa Ana adopted a CAP in December 2015. Table 15 summarizes the project's consistency with applicable CAP measures. The project would be consistent with applicable regional and local plans and policies to reduce GHG emissions.

Table 15 Consistency with Applicable Santa Ana Climate Action Plan Measures

Reduction Strategy	Project Consistency
Transportation and Land Use	
Local Residential Nodes near Retail and Employment The City will develop an incentive program to encourage new residential projects to locate within these commercial and employment corridors. Potential incentives include amending zoning, density bonuses, reductions in parking requirements, and other similar efforts. This mix of land uses could potentially divert some work, shopping, and eating trips from automobile use to bicycle and pedestrian travel. This higher level of mixed-use is also more conducive to the increased use of transit.	**Consistent.** The proposed project would require approval of a General Plan Amendment from General Commercial (GC) to Urban Neighborhood (UN), and an Amendment Application (Zone Change) from Commercial General (C2) to Specific Development No. 97 (SD-97). The proposed project would be within walking and biking distance of existing residential, commercial, and recreational uses and would provide 44 bicycle parking spaces on the site. The project would also provide a children's playground on-site, which would reduce the number of trips to off-site recreational uses. Nonetheless, the project site is walking distance from three transit stop pairs serviced by the OCTA within 0.25-mile of the site: two located on Westminster Avenue and one on North Fairview Street. These features would incentivize the use of public transit, active transportation, and fuel-efficient vehicles for traveling to and from the site.

Reduction Strategy	Project Consistency
Design Guidelines for Internal Bike/Pedestrian/Transit Connectivity It is not uncommon for multifamily developments to have security fencing which prevents residents from accessing nearby sidewalks and bus stops. The City will create guidelines that specify a minimum level of connectivity between various projects and the external transportation network for travel modes other than automobiles.	**Consistent.** The project would provide external-to-internal pedestrian connectivity through courtyards, walkways, and a public children's playground. The project site is walking distance from three transit stop pairs serviced by the OCTA within 0.25-mile of the site: two located on Westminster Avenue and one on North Fairview Street.
Energy	
Property Assessed Clean Energy (PACE) Financing for Residential Properties PACE is an energy efficiency financing program operated by private contractors in many communities in California. PACE financing is available for a wide range of energy and water saving measures, and for renewable energy generation. Repayment of loans through the program is made on the property tax bill for the property. Communities must opt into the program, which began in September 2013. Across the communities statewide that are participating in residential PACE programs, the upgrades financed have produced an emissions reduction of 14,056 $MTCO_2e$, saved residents over $6 million in energy costs, and created 1,600 jobs.	**Consistent.** This measure is incentive-based and the project proponent may decide to implement energy efficiency and renewable energy projects financed through the PACE program. The project would include green building features that include solar energy, water efficient features, low flow plumbing fixtures, energy efficient appliances, and EV stations. The project would not preclude the proponent from participating in this incentive-based program.
Solar Photovoltaic Systems— New Private Installs This measure accounts for the impact of new private installations of solar Photovoltaic (PV) systems in Santa Ana. Rebates or incentive payments for installation of solar PV are available as part of the California Solar Incentive program, which is administered by the California Energy Commission. For a limited time, the City is offering solar incentives which may include permit fee waiver, free plan check services, and free building inspection for solar PV systems.	**Consistent.** This measure is incentive-based and the project proponent may decide to take advantage of the California Solar Incentive program, if still available. Solar energy features would be included in project design. The project would not preclude the proponent from participating in this incentive-based program.
Title 24 Energy Efficiency Standards – Residential Title 24 is the energy code that establishes the minimum energy efficiency for new construction in California. The code is set by the State and enforced locally by the City of Santa Ana through the building permit review and inspection process. Amended standards went into effect January 1, 2014. This measure reflects the expected savings from those amended standards in projected new residential construction in the City.	**Consistent.** Title 24 establishes the minimum energy efficiency for new construction in California. The code is set by the State and enforced locally by the City of Santa Ana. The project would be consistent with Title 24.

Reduction Strategy	Project Consistency
Solid Waste, Water, and Wastewater Measures	
AB 341 Commercial and Multifamily Recycling AB 341 was adopted as law by the State of California in 2011 and requires recycling by businesses that generate four cubic yards or more of commercial solid waste per week and multifamily residential dwellings of five units or more, starting July 1, 2012. The increased diversion of waste from landfills resulting from this requirement will reduce landfill methane emissions. Recycling programs can also reduce waste disposal costs for businesses and multifamily building owners.	**Consistent.** AB 341 was adopted by the State of California in 2011 and requires that multi-family residential dwellings of five units or more arrange for recycling services. The State also requires each city to track such recycling programs and report progress on a yearly basis. Waste Management of Orange County provides weekly service to residential properties; however, multi-family properties may conduct recycling activities independently of Waste Management. Nonetheless, the project would comply with the requirements of AB 341 and the City's monitoring process.

Note: The CAP includes measures specific to municipal operations. Those measures were excluded from this list because they apply to municipal operations and would not specifically apply to the proposed project.

Source: Santa Ana 2015

The project is consistent with regional and local strategies to reduce GHG emissions, as detailed in Table 14 and Table 15. The project would not substantially contribute to city, regional, or statewide GHG emissions or obstruct achievement of local targets and State mandates. The proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and would be consistent with Santa Ana's CAP. Therefore, the project's GHG impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

9 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 0.25 mile of an existing or proposed school?	☐	☐	☐	■
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e. For a project located in 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?	☐	☐	■	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	■

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b. Would the project 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?

The project entails infill development of 85 apartment units within two buildings on a 2.1-acre site. Construction activities would not generate hazardous waste materials (such as asbestos or lead) from demolition since the project site is currently vacant. Limited quantities of hazardous materials (such as solvents and low VOC paints or finishes) may be used during building construction, and transportation, use, storage, and disposal of construction materials and equipment would comply with applicable federal, State, and local regulations, standards, and guidelines.

Proposed residential uses would not emit or handle hazardous materials beyond typical household and landscape waste and materials, and the project would not create a hazard to the public through transportation of hazardous materials upon completion and residential occupancy. Therefore, the project would result in a less than significant impact.

LESS THAN SIGNIFICANT IMPACT

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

There are no schools within 0.25 mile of the project site. The Doig Intermediate School (12752 Trask Avenue) is located nearest to the project site, approximately 0.4 mile north. As stated under impact discussions *a.* and *b.* of this section, the project would not emit or handle hazardous materials, substances, or waste during project construction or operation. The project would not impact schools. Therefore, the project would result in no impact.

NO IMPACT

d. Would the project be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

A Phase I Environmental Site Assessment (ESA) completed for the project site (December 2019) is included as Appendix D. The project site was developed for residential use between 1935 and 1953 and redeveloped for retail and commercial uses between 1961 and 2015. The project site has remained vacant since 2015. Phase I and Phase II ESAs were completed in 2018 and are summarized in the recent (2019) Phase I ESA. The 2018 Phase I ESA determined that one 2,000-gallon gasoline underground storage tank (UST) was removed from the project site in 2000. The 2018 Phase II ESA was completed based on the former UST and equipment rental business that was present on site.

As part of the 2018 Phase II ESA, soil and soil vapor samples were taken from the project site to analyzed volatile organic compounds (VOCs) and full carbon chain petroleum hydrocarbons that may be present from the previous UST. No VOCs were detected in either soil or soil vapor samples, and TEI did not recommend any further investigation or remediation for the project site (Appendix D). Partner concludes that the former operations of the equipment rental business and impacts of the former UST do not appear to represent a significant environmental concern (Appendix D).

There are no hazardous material sites located on the project site that are listed in federal and State databases, which included the Regional Water Quality Control Board's Geotracker and the California

Department of Toxic Substance Control's EnviroStor. There is no presence or likely presence of any hazardous substances or petroleum products in, on, or at the project site; evidence of a past release of hazardous substances or petroleum products that have been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls or meeting unrestricted use criteria established by a regulatory authority, without subjecting the site to any required controls upon investigation of the site (Appendix D). Therefore, the proposed project would result in no impact.

NO IMPACT

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 public airports or private airstrips are located within two miles of the project site. The project site is located approximately six miles northwest of John Wayne Airport (18601 Airport Way), which is the nearest airport to the project site. According to the Orange County Airport Land Use Commission (ALUC) Land Use Plan for the John Wayne Airport, the project site is not located within the John Wayne Airport Influence area (Orange County ALUC 2008). Therefore, the project would result in no impact.

NO IMPACT

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The project would not result in street closures that could impede emergency access or evacuation. Final project design would be subject to plan check by the City Planning and Building Agency and the Orange County Fire Authority to ensure proposed driveway along Westminster Avenue and on-site circulation meet applicable turn-radius standards for emergency vehicles and fire apparatus. The City of Santa Ana Office of Emergency Management assists all City departments and residents in preparing for, responding to, and recovering from disasters and other emergencies (Santa Ana 2020d). The City maintains an Emergency Services Plan, which provides direction and guidance for officials and citizens in the event of emergencies related to earthquakes, flood, major fires and/or explosions, industrial accidents, bomb threats and explosions, utility failures, radiological hazards, welfare and mass care, water quality emergencies, traffic control and hazardous materials spills (Santa Ana 2020d). The proposed project would not interfere with the implementation of the City's emergency management plans. Therefore, the project would result in a less than significant impact.

LESS THAN SIGNIFICANT IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The project site is vacant and is located adjacent to existing residential, commercial, and industrial uses in an urbanized area. There are no wildland conditions on or adjacent to the project site. The project site is not located in a designated Very High Fire Hazard Severity Zone (VHFHSZ) or a State Responsibility Area (SRA), as further discussed in Section 20, *Wildfire*. Therefore, the project would result in no impact.

NO IMPACT

10 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?	☐	☐	■	☐
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?	☐	☐	☐	■

A project-specific Preliminary Hydrology and Hydraulics Study (Hydraulics Study) and a Preliminary Water Quality Management Plan (WQMP) were prepared July 2020 and August 2020, respectively. These studies are included as Appendices F and G, respectively. The discussion herein is largely based on the Hydraulics Study, WQMP, and additional cited sources.

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

According to the City's 2010 General Plan Conservation Element, the encouragement of water conservation through design and facilities features of new developments through the use of water quality wetlands, biofiltration swales, watershed-scale retrofits, etc. where such measures are likely to be effective and technically and economically feasible is a citywide policy (Santa Ana 2010).

According to the City's Draft General Plan Update PEIR, new development projects in the city are required to comply with all City requirements the Construction General Permit (CGP) Water Quality Order 2009-009-DWQ, which requires the preparation and implementation of a project-specific Stormwater Pollution Prevent Plan (SWPPP). The SWPPP must describe the site, proposed facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation and approved local plans, control of construction sediment and erosion control measures, maintenance responsibilities, and non-stormwater management controls, as well as incorporation of BMPs. The SWPPP requirements need to be satisfied prior to beginning construction on any project located on a site greater than one acre.

The project would be required to prepare a SWPPP to comply with the City's CGP prior to construction activities. The WQMP prepared for the project (Appendix G) identifies structural and non-structural source control BMPs that would be implemented during project construction and operation, which aim to minimize urban runoff from the project site and minimize the impervious footprint of the proposed site plan through incorporation of landscaped areas and stormwater filtration vaults (Appendix G).

Construction contractors are responsible for implementing and monitoring BMPs, which include, but are not limited to, erosion and sedimentation control/drainage plans to ensure compliance with the City's CGP, and that contaminants are not released into urban runoff. The project would not violate water quality standards or otherwise substantially degrade water quality with adherence to the City's General Plan policies, compliance with the City's CGP, and implementation of a project specific SWPPP. Therefore, the project would result in a less than significant impact on water quality.

LESS THAN SIGNIFICANT IMPACT

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Groundwater was encountered at a depth of 22.5 feet during subsurface investigation of the project site completed by P.A. & Associates, Inc. (Appendix D). The sole source of water for the City of Santa Ana is a municipally owned system operated by the Santa Ana Public Works Agency. The City is a member of the Metropolitan Water district and receives approximately between 30 and 35 percent of its water supply imported from northern California via the State Water Project and the Colorado River via the Colorado River Aqueduct. The city receives the remaining 65 to 70 percent of its water supply from groundwater wells accessing the Santa Ana River groundwater basin (Santa Ana 2010). According to recent assessments completed as part of the City's Draft General Plan Update PEIR effort, the existing water supply for the city would be able to meet projected total water demand for 2040 (Santa Ana 2020a). The project site is served by the Orange County Water District (OCWD). The project would not rely on groundwater sources from the project site to meet residential demand.

Though the project would increase the amount of impervious surface on the site than compared to existing conditions, the incorporation of the stormwater filtration vaults would ensure stormwater is captured and treated on the project site prior to conveying to the off-site storm drain systems. The proposed capacity of the filtration vault was determined to be adequate for detaining the necessary volumes to reduce storm peak runoff flows to existing site runoff levels (Appendix F). Therefore, the project would result in a less than significant impact.

LESS THAN SIGNIFICANT IMPACT

c.(i) Would the project 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 result in substantial erosion or siltation on- or off-site?

c.(ii) Would the project 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

c.(iii) Would the project 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 that would 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?

c.(iv) Would the project 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 impede or redirect flood flows?

Storm runoff generally drains from southeast to northwest on the project site. The existing runoff drains off-site to the public storm drain system on Westminster Avenue and Huron Drive, ultimately going into a public catch basin on Westminster Avenue to the west of the project site (Appendix G). The existing drainage pattern with mostly be maintained under project conditions. The proposed stormwater system for the project site entails the installation of valley gutters that would capture and drain runoff into a filtration vault (ADS StormTech chamber) located on the north side of the

project site. Runoff from larger storm events would be conveyed via 18-inch reinforced concrete pipes (installed on site) to the existing 42-inch reinforced concrete pipes located on Westminster Avenue (Appendix G).

As stated above in the discussion provided for criteria 'b,' the project would increase the amount of impervious surface on the site than compared to existing conditions. However, the project includes the incorporation of stormwater filtration vaults would ensure stormwater is captured and treated on the project site prior to conveying to existing off-site storm drain systems. The proposed capacity of the filtration vault was determined to be adequate for detaining the necessary volumes to reduce storm peak runoff flows to existing site runoff levels (Appendix F). The project would not result in flood on or off-site, would not impede or redirect flood flows, and would not create or contribute runoff in excess of existing off-site storm drain capacities.

The proposed residential uses would not generate substantial amounts of hazardous wastes or pollutants, as discussed in Section 9, *Hazards and Hazardous Materials*. The proposed surface parking lot located in the southern portion of the project site (behind the proposed buildings) may contain trace amounts of auto lubricants and fuel on the pavement that may get carried off-site through surface runoff flows. However, the proposed stormwater filtration vaults would capture and filter the runoff prior to off-site conveyance.

As stated in Section 7, *Geology and Soils*, and under impact discussions *a.4* and *b.,* the project site is relatively flat and the project site would be covered by paving, landscaping, and the proposed buildings upon project completion; no areas of the project site would contain exposed soil. Erosion and siltation off-site from storm runoff would not occur as a result of the project. Therefore, the project would result in a less than significant impact.

LESS THAN SIGNIFICANT IMPACT

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

The project site is within Zone X, an area determined to have minimal flood hazards and/or with a 0.2 percent change of flooding, according to the Federal Emergency Management Agency's Flood Insurance Rate Map (FEMA 2009). The project site is located approximately 9.5 miles east from the nearest coastline, outside of a tsunami risk zone. The body of enclosed water nearest to the project site is the Haster Retarding Basin, located approximately 1.3 miles north. The project site and vicinity are relatively flat, and the project site is surrounded by existing development. Though a seiche could as a result of an earthquake, inundation risk to the project site would be low due to the distance existing development between the project site and the Haster Retarding Basin. Therefore, the project would result in no impact.

NO IMPACT

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

New development projects in the city are required to comply with the CGP, the Orange County MS4 Permit, and Santa Ana Municipal Code Chapter 18 Article IV (pertaining to water pollution regulations). Adherence to citywide regulatory requirements ensure surface and groundwater quality are not adversely impacted during project construction and operation. The project, as designed, would not obstruct or conflict with the implementation of the Santa Ana River Basin Water Quality Control Plan. The project would comply with all applicable regulatory requirements, prepare and implement a SWPPP, and install a stormwater filtration unit on site as analyzed in the Hydraulic Study (Appendix F). Therefore, the project would result in no impact.

NO IMPACT

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11 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. Would the project physically divide an established community?

The project would be an infill development and would construct 85 multi-family units in two buildings on a vacant site that had historically been developed with commercial/retail uses that have since been demolished. The project is surrounded by commercial and residential uses and near existing transit and utility infrastructure. The project does not involve construction of freeways, walls, or other features that would divide an established community, and no impact would occur.

NO IMPACT

b. Would the project 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?

The project would require approval of a General Plan Amendment from GC to UN, and a Zone Change from C2 to SD-97. The change of the project site to SD-97 would allow the development of the project and would bring the rezoned property into consistency with the General Plan UN land use designation. The General Plan Amendment and zoning changes would be needed since the GC and C2 designations do not allow for residential uses. The intensity standard for the Urban Neighborhood ranges from a floor area ratio (FAR) of 0.5 to 3.0. The project would construct 98,169 sf of building area in two 3- to 4-story buildings on a 2.1-acre (91,476 sf) project site.

The City's UN designation is described in the SAMC as follows:

> This zone is applied to primarily residential areas intended to accommodate a variety of housing types, with some opportunities for live-work, neighborhood-serving retail, and cafes. Appropriate building types include single dwellings, duplexes, triplexes and quadplexes, courtyard housing, rowhouses, and live-work. In some areas, the more intense, hybrid court building type is allowed where additional intensity is warranted while maintaining compatibility with neighboring properties. The landscape is appropriate to a neighborhood, with shading street trees in parkway strips, and shallow-depth landscaped front yards separating buildings from sidewalks. Parking is on-street, and in garages located away from street frontages.

With the approval of the General Plan Amendment by the City of Santa Ana to allow for residential use on the project site, the project would be consistent with the Santa Ana Zoning Ordinance. Furthermore, the project would fulfil some of the City's identified need for affordable housing and would realize the City's vision to diversify housing types, increase housing near transit, and encourage opportunities for open space and recreation, as described in the following Draft General Plan Update Policies (Santa Ana 2020b):

1. LU-1.5: Incentivize quality infill residential development that provides a diversity of housing types and accommodates all income levels and age groups.
2. LU-1.6: Encourage residential mixed-use development, within the City's District Centers and Urban Neighborhoods, and adjacent to high quality transit.
3. LU-4.7: Promote mixed-income developments with mixed housing types to create inclusive communities and economically diverse neighborhoods.
4. LU-4.8: Collaborate with property owners, community organizations, and other local stakeholders to identify opportunities for additional open space and community services, such as community gardens and gathering places.
5. LU-4.5: Concentrate development along high-quality transit corridors to reduce vehicle miles traveled (VMT) and transportation related carbon emissions.
6. LU-4.6: Support diverse and innovative housing types that improve living conditions and promote a healthy environment.

The project would be compatible with the surrounding residential and commercial uses, including existing courtyard-style multi-family housing approximately 0.10 mile to the west along Westminster Avenue. All aspects of the Santa Ana Municipal Code regulating building height, FAR, architectural style and design, landscaping, setbacks, parking, open space, trash enclosures, mechanical equipment, and other considerations that would regulate aesthetic and noise impacts would apply to the project. According to the standards set in the Santa Ana Municipal Code Section 41-593.4, the City reviews proposed projects for the purpose of ensuring that buildings, structures, and grounds will be in keeping with the neighborhood and will not be detrimental to the harmonious development of the city. Therefore, the project would result in less than significant environmental impacts due to a conflict with any land use plan, policy, or regulation.

LESS THAN SIGNIFICANT IMPACT

12 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. Would the project 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. Would the project 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?

According to the City's Draft General Plan Update PEIR, the city is predominately designated as Mineral Resource Zone 3 (MRZ-3), which indicates that the significance of mineral deposits cannot be determined from available data. According to the PEIR, mineral resource sectors are nonurbanized areas determined to contain a significant deposit of construction-quality aggregate that is available to meet future needs of the region, and include areas currently permitted for mining and areas found to have land uses compatible with possible mining (Santa Ana 2020a). However, there are no mineral resource sectors or mineral extraction activities in the city (Santa Ana 2010). The nearest sector, Sector J of the Lower Santiago Creek Resource Area, is a mile northeast of the city (Santa Ana 2020a). Furthermore, according to the California office of Mine Reclamation, no active or inactive mines are mapped in the project area (DOC 2018). The project site currently consists of previously developed and disturbed land in an urban area. No portion of the project site is currently zoned for mineral extraction or is being used for extraction of mineral resources. Therefore, the project would result in no impact with respect to mineral resources.

NO IMPACT

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13 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?	☐	■	☐	☐
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?	☐	☐	☐	■

The analysis in this section is based primarily on a Noise and Vibration Study prepared by Rincon Consultants, Inc. in November 2020. The Noise and Vibration Study is included as Appendix H.

Noise

The unit of measurement used to describe a noise level is the decibel (dB). However, the human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, a method called "A-weighting" is used to adjust actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz (Hz) and less sensitive to frequencies around and below 100 Hz, thus filtering out noise frequencies that are not audible to the human ear. A-weighting approximates the frequency response of the average young ear when listening to most ordinary everyday sounds. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the "A-weighted" levels of those sounds. Therefore, the A-weighted noise scale is used for measurements and standards involving the human perception of noise. In this analysis, all noise levels are A-weighted, and "dBA" is understood to identify the A-weighted decibel.

Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. A doubling of the energy of a noise source, such as a doubling of traffic volume, would increase the noise level by 3 dB; similarly, dividing the energy in half would result in a decrease of 3 dB (Crocker 2007).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive an increase (or decrease) of up to 3 dBA in noise levels (i.e., twice [or half] the sound energy); that an increase (or decrease) of 5 dBA (8 times [or one eighth] the sound energy) is readily perceptible; and that an increase (or decrease) of 10 dBA (10.5 times [or approximately one tenth] the sound energy) sounds twice (or half) as loud (Crocker 2007).

Descriptors

The impact of noise is not a function of loudness alone. The time of day when noise occurs, and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors has been developed. The noise descriptors used for this analysis are the one-hour equivalent noise level (L_{eq}) and the community noise equivalent level (CNEL).

- The L_{eq} is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period. Typically, L_{eq} is equivalent to a one-hour period, even when measured for shorter durations as the noise level of a 10- to 30-minute period would be the same as the hour if the noise source is relatively steady. L_{max} is the highest Root Mean Squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period (Crocker 2007).
- The CNEL is a 24-hour equivalent sound level with an additional 5 dBA penalty to noise occurring during evening hours, between 7:00 p.m. and 10:00 p.m., and an additional 10 dBA penalty to noise occurring during the night, between 10:00 p.m. and 7:00 a.m., to account for the added sensitivity of humans to noise during these hours (Caltrans 2013). Quiet suburban areas typically have a CNEL in the range of 40 to 50 dBA, while areas near arterial streets are in the 50 to 70+ CNEL range.

Propagation

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in sound level as the distance from the source increases. The way sound reduces with distance depends on factors such as the type of source (e.g., point or line), the path the sound will travel, site conditions, and obstructions. Sound levels from a point source (e.g., construction, industrial machinery, ventilation units) typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance. Sound from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013).

Vibration

Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of hertz (Hz). The vibration frequency of an object describes how rapidly it oscillates. The normal frequency range of most groundborne vibration that can be felt by the human body is from a low of less than 1 Hz up to a high of about 200 Hz (Crocker 2007).

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. Groundborne noise may result in adverse effects, such as building damage, when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz). Vibration may also damage infrastructure when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source (Federal Transit Administration [FTA] 2018). Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Descriptors

Vibration amplitudes are usually expressed in peak particle velocity (PPV) or RMS vibration velocity. The PPV and RMS velocity are normally described in inches per second (in./sec.). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings (Caltrans 2020).

Response to Vibration

Vibration associated with construction of the project has the potential to be an annoyance to nearby land uses. Caltrans has developed limits for the assessment of vibrations from transportation and construction sources. The Caltrans vibration limits are reflective of standard practice for analyzing vibration impacts on structures. The Caltrans Transportation and Construction Vibration Guidance Manual (Caltrans 2020) identifies impact criteria for buildings and criteria for human annoyances from transient and continuous/frequent sources: Table 16 presents the impact criteria for buildings, and Table 17 presents the criteria for humans.

Table 16 Vibration Damage Potential

Building Type	Maximum PPV (in./sec.)
Historic sites and other critical locations	0.1
Historic and other/similar old buildings	0.5
Older residential structures	0.5
New residential structures	1.0
Modern industrial/commercial buildings	2.0

PPV = peak particle velocity; in./sec. = inches per second

Source: Caltrans 2020

Table 17 Vibration Annoyance Potential

Human Response	Maximum PPV (in./sec.)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Severe/disturbing	2.00	0.70
Strongly perceptible	0.90	0.10
Distinctly perceptible	0.240	0.035
Barely perceptible	0.035	0.012

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls (i.e., a loose steel ball that is dropped onto structures or rock to reduce them to a manageable size). Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

PPV = peak particle velocity; in./sec. = inches per second

Source: Caltrans 2020

Propagation

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Variability in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances (Caltrans 2020). When a building is exposed to vibration, a ground-to-foundation coupling loss (the loss that occurs when energy is transferred from one medium to another) will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may amplify the vibration level due to structural resonances of the floors and walls.

Sensitive Receivers

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Generally, a sensitive receiver is identified as a location where human populations (especially children, the elderly, and sick persons) are present, and where there is a reasonable expectation of continuous human exposure to noise. According to the City's 2010 General Plan Noise Element, noise-sensitive land uses include residences, hospitals, schools, churches, libraries, and parks.

Vibration-sensitive receivers, which are similar to noise-sensitive receivers, include residences and institutional uses, such as hospitals, schools, and churches. However, vibration-sensitive receivers also include buildings where vibrations may interfere with vibration-sensitive equipment that is affected by vibration levels that may be well below those associated with human annoyance (e.g., recording studies or medical facilities with sensitive equipment).

As shown in Figure 2, the nearest sensitive receivers to the site are single-family residences adjacent to the site to the south and west. In addition, single-family residences are located across North Huron Drive approximately 60 feet to the west.

Project Noise Setting

The primary off-site noise sources in the project area are motor vehicles (e.g., automobiles, buses, and trucks), particularly along Westminster Avenue and North Fairview Street. As a local residential street, North Huron Drive would not be a substantial source of vehicle noise at the project site.

Nonetheless, the following analysis includes vehicle noise from North Huron Drive. Ambient noise levels would be expected to be highest during the daytime and rush hour unless congestion slows speeds substantially.

The FHWA Traffic Noise Prediction Model was used to model traffic noise along Westminster Avenue, North Fairview Street, and North Huron Drive under existing conditions to determine ambient noise levels at the project site. According to the TIA conducted by Fehr & Peers for the project, Westminster Avenue is a Major Arterial six-lane divided roadway with a posted speed limit of 40 miles per hour whereas North Fairview Street is a Major Arterial four-lane roadway with a posted speed limit of 40 miles per hour. Therefore, as major arterial roadways, a vehicle mix of 95 percent automobile, three percent medium-duty trucks, and two percent heavy-duty trucks was assumed for both roadways. Based on the TIA, North Huron Drive is a two-lane residential roadway; therefore, a vehicle mix of 97 percent automobile, two percent medium-duty trucks, and one percent heavy-duty trucks was assumed for this roadway. Based on peak hour and daily traffic volume data collected as part of the TIA, the segment of Westminster Avenue abutting the site carries approximately 30,000 ADT, the segment of North Fairview Street abutting the site carries approximately 24,000 ADT, and the segment of North Huron Drive abutting the site carries approximately 640 ADT (Appendix E). According to modeled results for this roadway segment, the combined ambient noise level at the project site is approximately 71 CNEL. Traffic Noise Prediction Model results are included in Appendix H.

Regulatory Setting

State of California

According to the 2019 California Building Code (CBC), Title 24, Part 2, Section 1206.4 (Allowable Interior Noise Levels) of the California Code of Regulations, interior noise levels attributable to exterior sources shall not exceed 45 CNEL in any habitable room. A habitable room is typically a residential room used for living, sleeping, eating, or cooking. Bathrooms, closets, hallways, utility spaces, and similar areas are not considered habitable rooms for this regulation.

City of Santa Ana Noise Element

The intent of the Santa Ana General Plan Noise Element (2010) is to establish regulations and criteria for acceptable noise levels for different land uses to guide planning decisions and minimize the negative impacts of noise, especially at sensitive receiver locations. According to the Noise Element, residential land uses have an interior noise standard of 45 CNEL and an exterior noise standard of 65 CNEL. Residential uses should be protected with sounds insulation over and above that provided by normal building construction when constructed in areas exposed to greater than 60 CNEL (Santa Ana 2010).

City of Santa Ana Municipal Code

Chapter 18, Article VI, *Noise Control*, of the Santa Ana Municipal Code (SAMC) contains the City's Noise Ordinance and establishes a series of regulations and standards to prevent excessive noise that may jeopardize the health, welfare, or safety of the citizens or degrade their quality of life. Specifically, SAMC Section 18-312, *Exterior Noise Standards*, and Section 18-313, *Interior Noise Standards*, establish standards for residential property in the city. As shown in Table 18, the noise standards differ between daytime (7:00 AM to 10:00 PM) and nighttime (10:00 PM to 7:00 AM) hours.

Table 18 Residential Noise Level Standards (L_{eq}, dBA)

Standard Type	Daytime 7:00 AM to 10:00 PM	Nighttime 10:00 PM to 7:00 AM
Exterior	55 dBA	50 dBA
Interior	55 dBA	45 dBA

Source: SAMC Sections 18-312, 18-313

According to SAMC Section 18-312(b), it shall be unlawful for any person at any location within the City of Santa Ana to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, when the foregoing causes the noise level, when measured on any other residential property, to exceed:

1. The exterior noise standard for a cumulative period of more than 30 minutes in any hour; or
2. The exterior noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour; or
3. The exterior noise standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour; or
4. The exterior noise standard plus 15 dBA for a cumulative period of more than 1 minute in any hour; or
5. The exterior noise standard plus 20 dBA for any period of time.

Furthermore, according to SAMC Section 18-312(c), in the event the ambient noise level exceeds any of the first four noise limit categories listed above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

According to SAMC Section 8-313(b), it shall be unlawful for any person at any location within the City of Santa Ana to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, when the foregoing causes the noise level, when measured within any other dwelling unit on any residential property, to exceed:

1. The interior noise standard for a cumulative period of more than 5 minutes in any hour; or
2. The interior noise standard plus 5 dBA for a cumulative period of more than 1 minute in any hour; or
3. The interior noise standard plus 10 dBA for any period of time.

Furthermore, according to SAMC Section 18-313(c), in the event the ambient noise level exceeds either of the first two noise limit categories listed above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the third noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

According to SAMC Section 18-314(e), *Special Provisions*, noise sources associated with construction, repair, remodeling, or grading of any real property, are exempt from the provisions of the City's Noise Ordinance provided such activities do not take place between the hours of 8:00 PM and 7:00 AM on weekdays, including Saturday, or any time on Sunday or a federal holiday.

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?

The proposed project involves the construction of 85 apartment units within two 3- to 4-story buildings and associated parking spaces. Noise-sensitive receivers, consisting of single-family residences to the south and west, may be subject to both temporary construction noise and long-term operational noise. The following discussions address construction and operational noise associated with the project.

Construction Noise

Construction activity would result in temporary increases in ambient noise in the project area on an intermittent basis and, as such, would expose surrounding noise-sensitive receivers to increased noise. As discussed under *Regulatory Setting* of this section, SAMC Section 18-314(e) exempts noise sources associated with construction, repair, remodeling, or grading of any real property, from the provisions of the City's Noise Ordinance provided such activities do not take place between the hours of 8:00 PM and 7:00 AM on weekdays, including Saturday, or any time on Sunday or a federal holiday. While the City does not have specific noise level criteria for assessing daytime construction impacts, the FTA has developed criteria for determining whether construction of a project would result in a substantial temporary increase in noise levels. Based on FTA guidance, a significant impact would occur if project-generated construction noise exceeds a one-hour 90 dBA L_{eq} noise limit during the day at the nearest residences (FTA 2018). For this analysis, the City has adopted the FTA thresholds for determining if noise levels from construction would result in a substantial temporary increase in noise levels at local sensitive receivers.

Construction noise was estimated using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) (2006). RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. Using RCNM, construction noise levels were estimated at noise-sensitive receivers near the project site. RCNM provides reference noise levels for standard construction equipment, with an attenuation of 6 dBA per doubling of distance.

For construction noise assessment, construction equipment can be considered to operate in two modes: stationary and mobile. As a rule, stationary equipment operates in a single location for one or more days at a time, with either fixed-power operation (e.g., pumps, generators, and compressors) or variable-power operation (e.g., pile drivers, rock drills, and pavement breakers). Mobile equipment moves around the construction site with power applied in cyclic fashion, such as bulldozers, graders, and loaders (FTA 2018). Noise impacts from stationary equipment are assessed based on the location of the center of the equipment, while noise impacts from mobile construction equipment are assessed based on the location of the center of the equipment activity area (e.g., construction site).

Each phase of construction has a specific equipment mix, depending on the work to be accomplished during that phase. Each phase also has its own noise characteristics; some will have higher continuous noise levels than others, and some may have high-impact noise levels (FTA 2018). In typical construction projects, grading activities generate the highest noise levels because grading involves the largest equipment and covers the greatest area. Project construction phases would include site preparation, grading, building construction, architectural coating, and paving of the project site. It is assumed that diesel engines would power all construction equipment. For assessment purposes, the "loudest" construction hour has been used for this assessment regardless

of phase (i.e., grading and building construction), and has been modeled based on the conservative assumption that a dozer, an excavator, and a jackhammer would be operating simultaneously.

Construction equipment would be continuously moving across the site, coming near and then moving further away from individual receivers. Therefore, due to the dynamic nature of construction, maximum hourly noise levels are calculated at various distances from the center of on-site construction activity to the nearest receivers. Based on the configuration of the project site, construction activities would occur, on average, 150 feet within site boundaries. Due to the dynamic nature of construction, maximum hourly noise levels are calculated from the average center of on-site construction activity. Therefore, based on the "L-shaped" configuration of the project site, construction activities would occur, on average, 75 feet within the site boundaries. Construction noise was modeled at 75 feet from adjacent single-family residences and 135 feet from single-family residences across North Huron Drive to the west. Construction noise levels and distances to the nearest receivers are shown in Table 19. RCNM calculations are included in Appendix H.

Table 19 Maximum Construction Noise Levels

	Approximate dBA L_{eq} (one-hour) at Single-Family Residences	
Construction Equipment	**75 Feet**	**135 Feet**
Bulldozer, Excavator, Jackhammer	81	76

See Appendix H for RCNM results.

As shown in Table 19, maximum hourly noise levels during construction were calculated at 81 dBA L_{eq} at the nearest noise-sensitive receivers, consisting of single-family residences. Therefore, construction noise levels would not exceed the daytime noise criterion of 90 dBA L_{eq} (FTA 2018). In addition, according to project information, construction activities would occur Monday through Friday between 7:00 AM and 3:00 PM. Therefore, while construction noise levels could exceed 80 dBA L_{eq} at the adjacent single-family residences, such activities would not occur during nighttime hours and would not exceed the nighttime noise criterion of 80 dBA L_{eq} (FTA 2018). Furthermore, as construction activities would not occur between the hours of 8:00 PM and 7:00 AM on weekdays, noise sources from project construction are exempt from the provisions of the City's Noise Ordinance per SAMC Section 18-314(e). Construction noise levels would not exceed applicable standards at nearby residences, and impacts would be less than significant.

Land Use Compatibility

The most predominant source of noise at the project site is vehicular traffic on Westminster Avenue. According to the Noise Element, residential land uses have an interior noise standard of 45 CNEL and an exterior noise standard of 65 CNEL (Santa Ana 2010). The City's interior noise standard of 45 CNEL is also consistent with the Title 24, Part 2, Section 1206.4 (Allowable Interior Noise Levels) of the California Code of Regulations, which states that interior noise levels attributable to exterior sources shall not exceed 45 CNEL in any habitable room. According to the Noise Element, residential uses should be protected with sound insulation over and above that provided by normal building construction when constructed in areas exposed to greater than 60 CNEL (Santa Ana 2010).

Based on noise contours calculated using the FHWA Traffic Noise Prediction Model (Appendix H) for the Existing plus Project traffic volume scenario, residential units with line-of-sight to Westminster Avenue would be exposed to an ambient noise level up to 70 CNEL, residential units with line-of-

sight to North Fairview Street would be exposed to an ambient noise level up to 64 CNEL, and residential units with line-of-sight to North Huron Drive would be exposed to an ambient noise level up to 56 CNEL. Therefore, residential units with line-of-sight to Westminster Avenue would be exposed to noise levels in excess of the City's exterior noise standard of 65 CNEL and would require sound insulation to reduce interior noise levels to below 45 CNEL per City and state regulations.

Generally, any large structure blocking the line-of-sight would provide at least a 5-dBA reduction in source noise levels at the receiver (FHWA 2011). Structures can substantially reduce occupants' exposure to noise as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows (FHWA 2011). Based on modeled future noise levels of up to 70 CNEL and a noise attenuation of at least 20 dBA, the interior noise level at habitable rooms would be 50 CNEL. Therefore, interior noise levels at units facing Westminster Avenue would exceed the City's interior noise standard of 45 CNEL.

Implementation of Mitigation Measure N-1 would require implementation of sound insulation to minimize exterior noise levels at interior habitable rooms and otherwise show that the project would be consistent with Title 24, Part 2, Section 1206.4 (Allowable Interior Noise Levels) of the California Code of Regulations. Furthermore, implementation of Mitigation Measure N-2 would require implementation of sound attenuation features to reduce noise levels at all private outdoor livable spaces (i.e., balconies and patios).

Mitigation Measure

N-1 Interior Noise Reduction

To comply with Title 24, Part 2, Section 1206.4 (Allowable Interior Noise Levels) of the California Code of Regulations, the applicant shall install exterior building materials with sufficient Sound Transmission Class (STC) ratings to reduce interior noise levels in habitable rooms to below 45 CNEL. To reduce potential noise impacts to future project residents, residential units with line-of-sight to Westminster Avenue shall incorporate design measures for windows, walls, and doors that achieve a composite STC rating of at least 30 and all exterior doors and windows shall be installed such that there are no air gaps or perforations. This requirement shall be incorporated into the plans to be submitted by the applicant to the City of Santa Ana for review and approval prior to the issuance of building permits. Acoustical analysis shall be performed prior to the issuance of an occupancy permit to demonstrate that noise levels in the interior livable spaces do not exceed the interior noise standard of 45 CNEL in any habitable room as set forth by the City and California Code of Regulations, Title 24, Section 1206.4.

N-2 Exterior Noise Reduction

The applicant shall implement sound attenuation features to reduce noise levels at all private outdoor livable spaces (i.e., balconies) on residential units and patios fronting Westminster Avenue and North Fairview Street. Such features may include the use of solid material for balcony or parapet construction such as double-paned or laminated glass, plexiglass, or wood. This requirement shall be incorporated into the plans to be submitted by the applicant to the City of Santa Ana for review and approval prior to the issuance of building permits. Acoustical analysis shall be performed prior to the issuance of an occupancy permit to demonstrate that noise levels at the exterior livable spaces do not exceed the City's exterior noise standard of 65 CNEL.

Implementation of Mitigation Measure N-1 and N-2 would reduce exterior noise levels to meet the interior noise standard of 45 CNEL and would reduce noise levels at on-site outdoor living areas.

Operational Noise

Operation of the project would generate noise from rooftop heating, ventilation, and air conditioning (HVAC) equipment, delivery- and trash-hauling trucks, and on-site vehicle circulation and parking, and light outdoor recreation such as that from the public playground area, balconies, and decks.

Heating, Ventilation, and Air Conditioning (HVAC) Equipment

Noise from rooftop-mounted HVAC equipment typically generates noise in the range of 60 to 70 dBA Leq at a reference distance of 15 feet from the source (Illingworth & Rodkin, Inc. 2009). The nearest noise-sensitive receivers, consisting of adjacent single-family residences (see Figure 2) would be located at approximately 67 feet from the nearest rooftop-mounted HVAC equipment based on the approximate 45-foot height of the proposed residential buildings in addition to the project's approximately 50-foot setback from the nearest residential properties. Because noise from HVAC equipment would attenuate at a rate of approximately 6 dBA per doubling of distance from the source, rooftop-mounted equipment would generate noise levels in the range of 47 dBA L_{eq} and 57 dBA L_{eq} at 67 feet. Furthermore, rooftop HVAC units are traditionally shielded from surrounding land uses with parapets and roofs that block line-of-sight to sensitive receivers that typically provide at least a 5-dBA noise reduction. Therefore, rooftop-mounted equipment would generate noise levels in the range of 42 dBA L_{eq} and 52 dBA L_{eq}.

Using traffic volume data included in the TIA (Appendix E) for the nearest roadway segments of North Huron Drive (between Westminster Avenue and West 16th Street) and West 16th Street (west of North Fairview Street) and the FHWA Traffic Noise Prediction Model the ambient noise levels at single-family residences were estimated between 53 dBA L_{eq} and 55 dBA L_{eq} (Appendix H). Based on the estimated noise levels between 42 dBA L_{eq} and 52 dBA L_{eq} for HVAC equipment, noise levels from such equipment at the project would not exceed the ambient noise at adjacent single-family residences. Therefore, operational noise impacts associated with HVAC equipment would be less than significant.

Delivery- and Trash-hauling Trucks

The project would require periodic delivery and trash hauling services, which generate noise from medium-duty truck operations and idling engines. However, noise associated with delivery and trash-hauling trucks would be an intermittent noise source and are already a common occurrence in the project vicinity due to existing residential and commercial/retail uses that make up the developed urban area. Because delivery and trash trucks are already a common occurrence throughout the city, such services would not result in a substantial permanent increase in ambient noise levels without the project. Operational noise impacts associated with delivery- and trash-hauling trucks would be less than significant.

On-site Vehicle Circulation and Parking

The project would generate noise from passenger vehicles circulating and parking on-site. However, similar to noise from delivery- and trash-hauling trucks, noise associated on-site vehicle circulation and parking is already a common occurrence in the project area due to existing residential and commercial uses in the developed urban area. Furthermore, as discussed in Project Noise Setting of

this study, the primary noise source in the project area are motor vehicles (e.g., automobiles, buses, and trucks), particularly along Westminster Avenue. Therefore, operational noise from on-site passenger vehicles would not result in a substantial permanent increase in ambient noise levels compared to ambient noise levels without the project. Operational noise impacts associated with on-site vehicle circulation and parking would be less than significant.

Outdoor Recreation Noise

Operational noise associated with outdoor use areas (i.e., public playground area, balconies, and decks) at the project would include playing children, conversations, and potentially music. While conversations and music would be comparable to those of existing residences in the project area, noise from playground activities and playing children would be a new source of noise. Due to the western public playground's proximity to single-family residences, noise from playing children would be the most predominant source of outdoor recreation noise associated with the project.

According to project plans, the playground would be approximately 5,000 sf in size based on a 64-foot width and an approximately 79-foot length. Therefore, this analysis assumes the on-site playground would have the capacity for approximately 20 children at once, which would generate approximately 60 dBA L_{eq} at 50 feet from the source (Sacramento 2011). The nearest single-family residence would be located adjacent to the playground area's southern boundary and, therefore, would be exposed to recreation noise levels of approximately 60 dBA L_{eq}. As previously modeled using FHWA Traffic Noise Prediction Model, the ambient noise levels at single-family residences were estimated between 53 dBA L_{eq} and 55 dBA L_{eq}; therefore, on-site recreation noise generated by the playground could exceed ambient noise levels at the adjacent single-family residences south of the playground area. Although an existing approximately six-foot concrete masonry unit (CMU) wall is located between the playground area and single-family residence, the wall may not entirely block the line-of-sight between the uses. As previously discussed, any large structure blocking the line-of-sight would provide at least a 5-dBA reduction in source noise levels at the receiver (FHWA 2011). Therefore, Mitigation Measure N-3 would be required to implement a CMU wall, or other type of wall of similar thickness, of at least eight feet in height to block the line-of-sight between the playground area and adjacent single-family residence.

According to the Housing and Urban Development's Barrier Performance Module, an eight-foot barrier would result in a noise reduction of approximately 5 dBA. Noise barrier performance calculations are included in Appendix H. A 5-dBA reduction would reduce the playground noise level at the nearest single-family residence from up to 60 dBA L_{eq} to 55 dBA L_{eq} Due to the nature of playground noise (i.e., sudden bursts of activity from children), noise levels would be spontaneous and infrequent. Compared to the City's noise standards detailed in SAMC Section 18-312(b), playground noise would not increase ambient noise levels (i.e., between 53 dBA L_{eq} and 55 dBA L_{eq}) by 5 dBA for a cumulative period of more than 15 minutes in any hour. Moreover, noise from playing children would more frequently occur during the daytime, where there is greater activity and this type of noise source is more acceptable.

Mitigation Measure

N-3 Outdoor Noise Attenuation

The applicant shall implement sound attenuation features to reduce recreation noise from the playground area on the adjacent single-family residence south of the playground. Such features may include a CMU wall, or other wall constructed of solid material, at least eight feet in height along the

southern boundary of the playground area. This requirement shall be incorporated into the plans to be submitted by the applicant to the City of Santa Ana for review and approval prior to the issuance of building permits.

Operational noise impacts associated with light recreation would be less than significant with implementation of Mitigation Measure N-3.

Operational Noise Conclusion

Operational noise generated by the project would not exceed the City's noise standards and impacts would be less than significant with implementation of Mitigation Measure N-3.

Traffic Noise Impacts

The project would generate vehicle trips, thereby increasing traffic on area roadways. Off-site project noise (i.e., roadway noise) would result in a significant impact if the project would cause the ambient noise level measured at the property line of affected uses to increase by 3 dBA, which would be a perceptible increase in traffic noise. Roadway noise impacts were assessed on Westminster Avenue because vehicle access to the project site would be provided be this roadway and it would therefore carry the highest volumes of traffic generated by the project.

As discussed in Section 17, *Transportation*, the proposed project would result in an increase of 462 daily trips, including 31 trips during the AM peak hour and 37 trips during the PM peak hour (Fehr & Peers 2020; Appendix E). Based on peak hour traffic volume data collected as part of the TIA, the segment of Westminster Avenue nearest to the site carries approximately 30,000 ADT (Appendix E). Adding all 462 daily vehicle trips generated by the proposed project to the nearest segment of Westminster Avenue would increase traffic along this roadway by approximately 1.5 percent, which would increase traffic noise by less than 0.5 CNEL.[3] Therefore, the project would not create a perceptible 3-dBA increase in traffic noise. Noise impacts associated with off-site traffic generated by the proposed project would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Operation of the project would not include stationary sources of significant vibration, such as heavy equipment operations. Rather, construction activities have the greatest potential to generate groundborne vibration affecting nearby receivers. Certain types of construction equipment can generate high levels of groundborne vibration. Construction of the project would potentially utilize loaded trucks, jackhammers, and/or bulldozers during most construction phases.

The City has not adopted specific standards for vibration impacts during construction. Therefore, the Caltrans *Transportation and Construction Vibration Guidance Manual* (2020) is used to evaluate potential construction vibration impacts related to both potential building damage and human annoyance. Based on the Caltrans criteria shown in Table 14 and Table 15, construction vibration impacts would be significant if vibration levels exceed 0.5 in./sec. PPV for residential structures and 2.0 in./sec. PPV for commercial structures, which is the limit where minor cosmetic, i.e. non-structural, damage may occur to these buildings. In addition, construction vibration impacts would

[3] A doubling of traffic is required for an audible 3 dB increase in traffic noise levels. However, the increase in traffic generated by the proposed project would be approximately 1.5 percent of the estimated ADT on Westminster Avenue.

cause human annoyance at nearby receivers if vibration levels exceed 0.24 in./sec. PPV, which is the limit above which temporary vibration activities become distinctly perceptible.

Because groundborne vibration could cause physical damage to structures, vibration impacts were modeled based on the distance from the location of vibration-intensive construction activities, conservatively assumed to be at edge of the project site, to the edge of nearby off-site structures. Therefore, the analysis of groundborne vibrations differs from the analysis of construction noise levels in that modeled distances for vibration impacts are those distances between the project site to nearest off-site structures (regardless of sensitivity) whereas modeled distances for construction noise impacts are based on the property line of the nearest off-site sensitive receivers. Based on the distance of nearby structures to the project site, vibration levels were modeled at 15 feet from adjacent commercial/retail buildings and single-family residences to the east and south and 80 feet from the commercial/retail building and single-family residences to the west across North Huron Drive. Vibration calculations are included in Appendix H. Table 20 shows estimated groundborne vibration levels from project equipment that are likely to result in the highest vibration levels.

Table 20 Vibration Levels at Receivers

Equipment	in./sec. PPV			
	Single-Family Residences 15 Feet	Commercial/ Retail Buildings 15 Feet	Single-Family Residences 80 Feet	Commercial/ Retail Building 80 Feet
Large Bulldozer	0.156	0.156	0.025	0.025
Loaded Truck	0.133	0.133	0.021	0.021
Jack Hammer	0.061	0.061	0.010	0.010
Small Bulldozer	0.005	0.005	0.001	0.001
Threshold for Building Damage[1]	0.5	2.0	0.5	2.0
Threshold for Human Annoyance[2]	0.24	0.24	0.24	0.24
Thresholds Exceeded?	**No**	**No**	**No**	**No**

See Appendix H for vibration analysis worksheets.

[1] Caltrans 2020. See Table 2.

[2] Caltrans 2020. See Table 3.

As shown in Table 20, construction activities would generate peak vibration levels of approximately 0.2 in./sec. PPV at the nearest single-family residences and commercial/retail buildings. Therefore, according to the Caltrans vibration criteria, groundborne vibration from typical construction equipment would not exceed the applicable threshold of 0.5 in/sec. PPV for building damage at adjacent residences surrounding the project site, nor would it exceed the applicable threshold of 2.0 in./sec. PPV for building damage at adjacent commercial development. Furthermore, groundborne vibration would not exceed the threshold of 0.24 in./sec. PPV for human annoyance. Project construction would not result in groundborne vibration that would cause building damage or human annoyance. Vibration impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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 9, *Hazards and Hazardous Materials*, the airport closest to the project site is the John Wayne Airport, located approximately six miles southeast of the site. According to the Orange County Airport Land Use Commission (ALUC) Land Use Plan for the John Wayne Airport, the site is not located within the airport's noise contours (Orange County ALUC 2008). Although the project site would potentially be subject to occasional aircraft overflight noise, such occurrences would be intermittent and temporary. In addition, there are no private airstrips in the vicinity of the project site. Therefore, the project would not expose people working in the project area to excessive noise levels associated with airports or airstrips and the project would not exacerbate existing noise conditions related to airports or airstrips. No impact would occur.

NO IMPACT

14 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 (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	■	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

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)?

The proposed project would involve construction of 85 apartment units, which would cause a direct increase in the city's population by introducing new residents to the project site. According to data provided by the California Department of Finance (DOF), the 2020 population of Santa Ana is 335,052 (DOF 2020). Given an average household size of 4.30 persons per household for Santa Ana, the project would potentially add approximately 366 residents (85 units x 4.30 persons per unit) to the city (U.S. Census 2020).

SCAG forecasts the population of Santa Ana will increase to approximately 343,100 by the year 2040, which is an increase of 8,048 persons from the current population (SCAG 2016). The addition of 366 residents in the project area would constitute 4.5 percent of the city's total projected population growth through year 2040. Therefore, the level of population growth associated with the proposed project would not exceed regional population projections. The above assumes all project residents are new to Santa Ana, whereas a likely scenario is that some of the future project residents may already live in the city. Therefore, the project would not directly or indirectly induce substantial unplanned population growth. Impacts to population growth would be less than significant.

LESS THAN SIGNIFICANT

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The project site is currently undeveloped, with no existing residences. As noted under impact discussion *a.* of this section, the project would construct 85 multi-family residential units. Therefore, the project would not necessitate the construction of replacement housing elsewhere because the project would have the overall effect of adding to the housing supply in the city. All units except the manager's unit would be designated as affordable housing units, so there would not be any economic displacement. There would be no impact.

NO IMPACT

15 Public Services

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:				
	1 Fire protection?	☐	☐	■	☐
	2 Police protection?	☐	☐	■	☐
	3 Schools?	☐	☐	■	☐
	4 Parks?	☐	☐	■	☐
	5 Other public facilities?	☐	☐	■	☐

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Orange County Fire Authority (OCFA) Battalion 9 provides fire protection services to Santa Ana. The nearest fire stations to the project site are OFCA Station 71 at 1029 West 17th Street in Santa Ana approximately 1.5 driving miles east of the project site, and Station 73 at 419 South Franklin Street in Santa Ana approximately two driving miles southeast of the site. OCFA Station 71 is currently staffed by six fire captions, six fire apparatus engineers and 12 firefighters, whereas OCFA Station 73 is currently staffed by three fire captains, three fire apparatus engineers, and six firefighters (OFCA 2020). OCFA's response time goal to emergency calls in urban areas is that the first response unit shall arrive at a priority emergency within 7 minutes and 20 seconds, 80 percent of the time. Even with rising fire incidents, OCFA meets the performance standard for emergency calls in the City of Santa Ana (Santa Ana 2020a).

Fire vehicles, staff, equipment, and expansion of existing facilities is funded by the 10-year cash contract with OCFA that is valid until 2030, which can be extended at the City's discretion. This contract is funded by the City's general fund, which is financed by property taxes, sales tax, and other revenue sources (Santa Ana 2020a). Funding from property taxes, as a result of population

growth, would be expected to grow roughly proportional to the increase in residential units and non-residential square footage associated with future development (Santa Ana 2020a). New or expanded fire protection facilities would be developed as a result of cumulative growth and not from individual projects.

The project would incrementally increase the service population of the OCFA by adding 85 new residential units to the project area. However, the project would be located in the existing service area of OCFA. Furthermore, the project would not impede the ability of OCFA to provide fire protection services to Santa Ana because existing roadways would not be altered, and appropriate fire protection measures would be included in the new development in accordance with the current CBC and California Fire Code. Furthermore, according to correspondence on October 29,2020 with Tamy Rivers, Management Analyst, of OCFA, final project design would be subject to plan check by OCFA to verify compliance with applicable fire prevention and protection requirements.

Therefore, while demand for fire protection services would incrementally increase due to the addition of new residential units, the ability of OCFA to meet its service goals would not be substantially impacted such that new or physically altered fire protection facilities would be required. Additionally, Santa Ana is a largely built-out city. If new or expanded facilities would be required due to cumulative population growth, such facilities would be unlikely to result in substantial environmental impacts as they are anticipated to be placed in converted commercial, retail, or government facilities already served by existing infrastructure. As a result, there would be a less than significant impact to fire protection services.

LESS THAN SIGNIFICANT IMPACT

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Santa Ana Police Department's (SAPD) main facility is the SAPD Administrative Building and Jail Facility located at 60 Civic Center Plaza, approximately 1.5 miles southeast of the project site. Other facilities include the Jose Vargas Community Affairs Office, Santa Ana Regional Transportation Public Safety Office, Westend Substation, Santa Ana Law Enforcement and Fire Training Center, and the Southeast Substation. The project site is located in the Westend District. Most of the SAPD facilities are approximately 20 years old and may need improvements. The SAPD has received funding to implement a family justice center. The center will concentrate on family crime and will offer guidance and education in addition to a facility where family crime reports can be filed. The site for the facility has not yet been determined (Santa Ana 2020a).

As of August 2019, 348 sworn positions and 250 professional staff positions serve the SAPD. The SAPD does not apply a staffing ratio (e.g., officers/population), but instead evaluates performance and needs based on call priority that differs among emergency life-threatening calls, nonemergency and non-life-threatening calls, and routine incidents. The SAPD, however, is less densely staffed than several neighboring Orange County cities, and substations are more lightly staffed. The Westend Substation at 3750 West McFadden Avenue and the Santa Ana Regional Transportation Public Safety Office at 1000 East Santa Ana Boulevard have planned programs to increase staffing. The SAPD also runs a recruitment retention plan in colleges to recruit new officers. SAPD Deputy Chief Paulson indicated that the current response time for Priority 1 calls by the SAPD (average

response time seven minutes and three seconds) meets the western states' average as well as the needs of the Santa Ana community (Sana Ana 2020a).

Funding for police facilities and staff comes from grants, special revenue funds, and the City's general fund. Staff needs could vary greatly based on crime trends, special events, and city needs. As growth in population would occur over time, the additional officers would not be hired at the same time. Moreover, the hiring of the additional officers would depend on the department's assessed needs, based on the growing number of calls for service or decreases in average response times in the future (Sana Ana 2020a).

Due to the potential increase in population, the project would contribute incrementally to demand for new or expanded police protection facilities. As described above for the project's incremental contribution to demand for new fire protection services, the project's incremental contribution to demand for new police protection facilities would be offset by the contribution of sales taxes from new residents, which would feed into the City's general fund. New or expanded police facilities may be implemented irrespective of the proposed project and would be required to undergo the appropriate level of environmental review. Since Santa Ana is a largely built-out city, new or expanded police facilities would be unlikely to result in substantial environmental impacts, as such facilities are anticipated to be placed in converted commercial, retail, or government facilities already served by existing infrastructure. Therefore, impacts with respect to police protection facilities would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

The project site is in the Santa Ana Unified School District (SAUSD), which covers approximately 24 square miles and encompasses portions of Santa Ana, Irvine, Costa Mesa, Newport Beach, Tustin, and unincorporated Orange County. SAUSD currently has 50,124 students in grades kindergarten (K) through 12 (2019–2020 academic year) (Santa Ana 2020a). The project would likely be served by John C. Fremont Elementary (Grades K-5), Romero-Cruz Academy (Grades Pre-K-8), and Santa Ana High School (Grades 9-12) (SAUSD 2020a).

The City's Draft General Plan Update PEIR uses an elementary student generation rate of 0.19, middle school student generation rate of 0.11, and high school student generation rate of 0.14 per multi-family dwelling unit (Santa Ana 2020a). Based on these rates, the project's 85 proposed multi-family dwelling units would generate approximately 16 elementary students, 9 middle school students, and 12 high school students. The 2019-20 school year enrollment, capacity, and impact of the project is shown in Table 21.

Table 21 SAUSD Capacity and Enrollment

School	School Grades	2019-20 School Enrollment	School Enrollment Capacity	Project Student Generation[1]	Capacity After Project Generation
John C. Fremont Elementary	K-5	480	775	8	287
Romero-Cruz Academy	Pre-K-8	1,009	1,525	17	499
Santa Ana High School	9-12	3,237	4,212	12	963
Total		**4,726**	**6,512**	**37**	**1,749**

K = Kindergarten; Pre-K = Pre-Kindergarten

[1]Elementary students equally divided between Fremont Elementary and Romero-Cruz Academy.

Source: City of Santa Ana 2020a

As shown in Table 21, there would be sufficient capacity in nearby schools to accommodate the students generated by the project, and no additional school facilities would be needed. Additionally, the Romero-Cruz Academy is a participant in the Overcrowding Relief Grant (ORG) program and recently constructed 16 new classrooms in a two-story building (SAUSD 2020).

Furthermore, pursuant to Section 65995(3)(h) of the California Government Code (Senate Bill 50, chaptered August 27, 1998), the payment of statutory fees "...is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization." State law assumes the developer's payment of school impact fees to the local school district, in an amount established by the school district, would address school capacity impacts. The project would not substantially increase enrollment at SAUSD schools, and all impact developer fees would be paid to the local school district. As such, the project would not result in substantial adverse impacts associated with schools. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.4. Would the project 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, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

The project would include the construction of 85 multi-family attached dwelling units. In addition, the project includes an approximately 5,000 sf common open space play yard with playground equipment, planter beds, shade structures and outdoor seating and picnic area and roof decks. The SAMC establishes a park standard of two acres of parkland to be provided for every 1,000 residents.

The City currently maintains approximately 353 acres of parkland in the city, which amounts to approximately 1.7 acres of parkland per 1,000 residents (Santa Ana 2020a). The project site is not identified as an anticipated addition to the open space network and, therefore, would not preclude future acquisition of additions to increase parkland in the city.

The project would add approximately 366 new residents to the city. This influx of population would not substantially decrease the existing parkland-to-resident ratio, which would remain at approximately 1.7 acres per 1,000 residents.

The project applicant would be required to pay parks and recreation improvement fees, pursuant to SAMC Section 35-110, which would be used to acquire parkland identified in the City's General Plan. Future parkland expansion projects would be required to undergo the appropriate level of project-specific environmental review and mitigate potentially significant environmental impacts, as necessary. Therefore, the project would not substantially worsen the City's existing deficiency in meeting its parkland ratio goal, and this impact would be less than significant. For more discussion relating to parkland and recreational amenities, please refer to Section 16, *Recreation*.

LESS THAN SIGNIFICANT IMPACT

a.5. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for other new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Main Library at 26 Civic Center Plaza is located approximately 1.9 miles southeast of the project site. The Main Library is 39,790 sf and has amenities such as computer labs with internet access, a learning center, and the Santa Ana History Room. The Newhope Library Learning Center, which is 10,600 sf, is at 122 North Newhope Street, approximately 1.7 miles southwest of the project site, and includes computer labs with internet access, a learning center, and a TeenSpace (Santa Ana 2020a). The American Library Association does not have standards for facility size and circulation, but rather, supports local benchmarks. The California Library Association fiscal year 2015 surveys indicate that the median library was 0.45 sf/capita in size. The existing library space and number of books are considered inadequate to meet the needs of the existing population. The City currently has a deficit of 99,409 sf in building area and a deficit of 243,483 in collection size; additional resources would also be needed, such as computers, staffing, and programs. Although there are currently no plans for future library facilities, the City is in the process of procuring a mobile library unit or bookmobile to better serve the population (Santa Ana 2020a).

The Jerome Community Center at 726 South Center Street is the closest community center to the project site, approximately 1.6 miles southeast of the project site. The Jerome Community Center is approximately 15,760 sf and last renovated in 2009 (Gillis + Panichapan Architects 2009). Funding for library and community center services and facility improvements comes primarily from the property tax revenue, fees, and government grants and private donations (Santa Ana 2020a).

The project would add approximately 366 new residents to the city. This influx of population would result in increased use of the library and community center facilities. However, facilities planning would be based on the increased demand for library and other public services in the city relative to overall population growth, and public services funded by the general fund would be maintained by property taxes to the City from building owners. Since Santa Ana is a largely built-out city, new or expanded public facilities would be unlikely to result in substantial environmental impacts, as such facilities are anticipated to be placed in converted commercial, retail, or government facilities already served by existing infrastructure. Therefore, the proposed project would result in a less than significant impact to the provision of other new or physically altered public facilities.

LESS THAN SIGNIFICANT IMPACT

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16 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 facility would occur or be accelerated?

As discussed in Section 15, *Public Services*, the City currently maintains approximately 353 acres of parkland in the city. The City's Parks, Recreation and Community Services department also operates the Santa Ana Zoo at Prentice Park and recreation programs and facilities. The nearest park to the project site is Edna Park, approximately 0.3-mile northeast of the project site, which is a 2.8-acre neighborhood park with an exercise trail, playground, picnic tables, and restroom facilities (Santa Ana 2020a).

The bicycle/pedestrian Santa Ana River Trail follows the Santa Ana River from the foothills of Chino Hills to the Pacific Ocean and connects to Edna Park. The nearest access point to the trail is approximately 0.2 mile east of the project site. The Santa Ana River Trail currently extends from the foothills of the Chino Hills to the Pacific Ocean at Huntington Beach where the trail ends. When finished, the Santa Ana River Trail will traverse a total of 110 miles from the San Bernardino County National Forest (County of San Bernardino 2020). The City recently received a grant for the restoration of the Triangle Park rest stop along the Santa Ana River Trail, approximately 0.3-mile northeast of the project site. The planned restoration will include renovation of the viewing deck with ADA accessibility, riparian landscape, benches, site signage, location/interpretive signage and fencing (Santa Ana 2020a).

The City currently maintains 1.7 acres of parkland per 1,000 residents, short of the stated SAMC goal of two acres per 1,000 residents (Santa Ana 2020a). The project would add approximately 366 residents to the city. Future residents of the project would likely use the facilities of Edna Park, the Santa Ana River Trail, and other City parkland and recreation facilities. However, the project's contribution to the city's population growth would not substantially decrease the existing parkland-to-resident ratio, which would remain at 1.7 acres per 1,000 residents.

As discussed in Section 15, *Public Services*, the project applicant would be required to pay parks and recreation improvement fees, pursuant to Section 35-110 of the SAMC, which would be used to

acquire parkland identified in the SAMC or maintain parkland facilities. Future parkland expansion projects would be required to undergo the appropriate level of project-specific environmental review and mitigate potentially significant environmental impacts, as necessary.

Furthermore, the project would provide 10,655 sf of outdoor area (i.e., courtyard, decks, picnic area, and playground area) and 4,725 sf of balcony space for a total of 15,380 sf of open space. The project's inclusion of open space and recreation facilities would lessen the use of the City's existing facilities. Because the project would not appreciably decrease parkland-to-resident ratios and would not interfere with the City's planned acquisition of additional parkland, and the applicant would be required to pay fees to the City's parks and recreation improvement program, the project would not create substantial demand on or cause substantial deterioration of city parks such that new park facilities would be required. Therefore, impacts to existing neighborhood and regional parks or other recreational facilities would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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?

As discussed under impact discussion *a.* of this section, the project would provide 10,655 sf of outdoor area (i.e., courtyard, decks, picnic area, and playground area) and 4,725 sf of balcony space for a total of 15,380 sf of open space. The impacts of the entire project, including this recreation space, are analyzed in this IS-MND. No additional impacts associated with these improvements would occur beyond those addressed for the project. The project would not require the construction of new off-site recreational facilities or expansion of existing recreational facilities. No impact would occur.

NO IMPACT

17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	■	☐
b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	■	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	☐	■	☐
d. Result in inadequate emergency access?	☐	☐	■	☐

Fehr & Peers prepared a Transportation Impact Analysis (TIA) in October 2020 to assess traffic impacts resulting from development of the proposed project. The following analysis is based on the findings of the TIA, which is included as Appendix E.

Existing Transportation System

The transportation system surrounding the project site consists of the roadway network, bicycle, pedestrian, and transit facilities. Regional access to the project site is provided by SR-22 and I-5, while local access is provided by Westminster Avenue and North Fairview Street. Residential streets near the site include West 16th Street and North Huron Drive. While none of the roadways surrounding the project site currently provide bicycle facilities, the primary bicycle amenity near the site is the Santa Ana River Trail, which is a Class I[4] multi-use path that follows the Santa Ana River. Pedestrian sidewalks are provided on both sides of all roadways near the site, including Westminster Avenue/West 17th Street, Mar Les Drive, North Huron Drive, West 16th Street, and North Fairview Street. On North Fairview Street, sidewalks end just south of the intersection with West 16th Street and no sidewalks are provided on the bridge crossing the Sana Ana River. Transit service in the project area is provided by the OCTA. There are three transit stop pairs within 0.25-mile of the project site: two located on Westminster Avenue and one on North Fairview Street. These include Route 60 and Bravo Route 560, which are located on Westminster Avenue, and Route 47/47A, which is located on North Fairview Street (Appendix E).

[4] According to the TIA, Class I bicycle facilities are multi-use paths that provide a separate right-of-way and are designated for the exclusive use of people riding bicycles and walking with minimal crossflow traffic.

Analysis Locations and Scenarios

The TIA analyzed a total of five intersections and roadway segments under six traffic volume scenarios. Through coordination with City staff, three intersections were selected for evaluation and include:

- Westminster Avenue/17th Street and North Fairview Street (Signalized)
- Westminster Avenue and Mar Les Drive (Unsignalized)
- North Fairview Street and West 16th Street (Unsignalized)

A queueing assessment was also completed to determine how project traffic would impact left turn queueing at three locations:

- Eastbound left-turn at Westminster Avenue/17th Street and North Fairview Street
- Westbound left-turn at Westminster Avenue and Mar Les Drive
- Northbound left-turn at West 16th Street and North Fairview Street

In addition, two roadway segments were also evaluated to determine if project traffic would result in neighborhood intrusion in the neighborhood adjacent to the site. The two segments selected for evaluation include:

- West 16th Street west of North Fairview Street
- North Huron Drive south of Westminster Avenue

To understand existing and future transportation system operations and the impact of project-generated vehicle trips, the following six traffic volume scenarios were analyzed:

- Existing
- Existing (2020) Plus Project
- Opening Year (2023)
- Opening Year (2023) Plus Project
- Cumulative Year (2045)
- Cumulative Year (2045) Plus Project

Analysis Methodology

To evaluate the study intersections, two methodologies were applied consistent with the Santa Ana Traffic Impact Study Guidelines (2019) and the County of Orange Congestion Management Program (CMP). The methodology documented in the Highway Capacity Manual 6th Edition (HCM) was applied for the two unsignalized intersections, whereas the Intersection Capacity Utilization (ICU) methodology was applied for the signalized intersection. The associated analysis included in the TIA was completed using Vistro 2020 software (Appendix E).

Intersection Capacity Utilization

The ICU method of intersection capacity analysis determines the intersection volume-to-capacity (V/C) ratio and corresponding Level of Service (LOS) for the turning movements and intersection

characteristics at signalized intersections. "Capacity" represents the maximum volume of vehicles in the critical lanes that have a reasonable expectation of passing through an intersection in one hour under prevailing roadway and traffic conditions. The ICU method calculates the V/C ratio for each critical movement by dividing volume by capacity. The V/C ratios for each critical movement are summed with an added allowance for yellow clearance to determine the total intersection V/C ratio.

The following assumptions were applied in the assessment, consistent with Santa Ana's Traffic Impact Analysis Site Specific Requirements:

- 1,600 vehicles per hour per lane (vphpl) for turning lanes
- 1,700 vphpl for through lanes
- Five percent clearance intervals

Highway Capacity Manual

The HCM methodology was used for evaluating the two-way stop-controlled study intersections. In the HCM method for unsignalized intersections, operations are defined by the average control delay per vehicle (measured in seconds). The control delay incorporates delay associated with deceleration, acceleration, stopping, and moving up in queue. At side-street stop-controlled intersections, the delay is calculated for each stop-controlled movement, the left turn movement from the major street, as well as the intersection average. The intersection average delay and highest movement/approach delay are reported for side-street stop-controlled intersections.

As noted in the TIA, the signal at North Fairview Street typically meters traffic and creates gaps in the traffic flow, which is not captured in the isolated intersection analysis using the HCM methodology. In addition, the HCM methodology cannot take into account the "Keep Clear" striping at the intersection, which was installed at this intersection to provide space for vehicles to merge onto Westminster Avenue when queues spill back from the signalized intersection of Westminster Avenue/17th Street and North Fairview Street.

Level of Service

After the quantitative V/C and delay estimates were completed, the methodologies assign a qualitative letter grade that represents the operations of the intersection. These grades range from LOS A (minimal delay) to LOS F (excessive congestion). LOS E represents at-capacity operations. Descriptions of the LOS letter grades for intersections are provided in Table 22.

PERFORMANCE CRITERIA

The City adopted LOS D performance criteria at signalized intersections. Signalized intersections that the project degrades below LOS D would be required to be improved to better than pre-project conditions. Unsignalized intersections do not have an established performance criterion for intersections that do not meet traffic signal warrant.

Queueing Assessment

A queueing assessment was performed for specific left-turn/U-turn movements to determine if the existing turn pockets would provide enough storage capacity. The HCM methodology was performed to estimate 50th percentile and 95th percentile queues. The 50th percentile queues represent the typical queue throughout the peak hour and the 95th percentile queue represents the

maximum queue that could be expected within the peak hour. The 50th percentile queues are only available for signalized intersection analysis.

Table 22 Level of Service (LOS) Criteria

Level of Service (LOS)	Description	ICU Volume to Capacity (V/C) Ratio	Signalized HCM Delay (seconds)	Unsignalized HCM Delay (second)
A	Signalized: Operations with very low delay occurring with favorable progression and/or short cycle length. Unsignalized: Little or no delay.	≤0.600	<10.0	≤10.0
B	Signalized: Operations with low delay occurring with good progression and/or short cycle lengths. Unsignalized: Short traffic delays.	0.601 to 0.700	>10.0 to 20.0	>10.0 to 15.0
C	Signalized: Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear. Unsignalized: Average traffic delays.	0.701 to 0.800	>20.0 to 35.0	>15.0 to 25.0
D	Signalized: Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable. Unsignalized: Long traffic delays.	0.801 to 0.900	>35.0 to 55.0	>25.0 to 35.0
E	Signalized: Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. Unsignalized: Very long traffic delays.	0.901 to 1.000	>55.0 to 80.0	>35.0 to 50.0
F	Signalized: Operation with delays unacceptable to most drivers occurring due to over saturation, poo progression, or very long cycle lengths. Unsignalized: Extreme traffic delays with intersection capacity exceeded	>1.000	>80.0	>50.0

Source: Transportation Impact Analysis, Fehr & Peers (Appendix E)

Neighborhood Intrusion Assessment

Some project trips are anticipated to utilize the residential streets of West 16th Street and North Huron Drive to access the project site since access from Westminster Avenue is restricted to right-in/right-out by a raised median. The purpose of this analysis is to estimate the potential impact the project may have on the surrounding residential streets due to the increase in traffic.

Vehicle Miles Traveled

Additional analysis was completed to understand how the VMT would compare to the VMT in the region, how access to and from the project site would function, and if the neighborhoods surrounding the project will be negatively impacted by an increase in traffic using residential streets to access the project.

Project Trip Generation

Project trip generation is based upon standard rates obtained from the ITE Trip Generation Manual 10th Edition. The trip generation rate for a Multi-family Mid Rise (ITE Land Use Code 221) land use was used for the analysis. According to the TIA, the project is forecast to generate approximately 462 daily trips, including 31 trips during the AM peak hour and 37 trips during the PM peak hour. Detailed trip generation calculations are included in the TIA in Appendix E.

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Existing (2020) Plus Project, Opening Year (2023) Plus Project, and Cumulative Year (2045) Plus Project traffic conditions were evaluated in the TIA for the study area intersections. Detailed technical calculations are included in Appendix E.

Level of Service

The LOS intersection analysis results for all traffic conditions are summarized in Table 23, Table 24, and Table 25 respectively.

Existing (2020) Plus Project

As shown in Table 23, the same two study intersections operate at or above capacity (LOS E or F) as did in Existing traffic conditions. The addition of Project traffic would not result in changes in LOS at any of the study intersections under Existing (2020) Plus Project traffic conditions.

Table 23 Existing (2020) Plus Project Conditions

		Existing				Existing (2020) Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Control	Delay (s/veh)/ V/C	LOS	Delay (s/veh)/ V/C	LOS	Delay (s/veh)/ V/C	LOS	Delay (s/veh)/ V/C	LOS
Westminster Ave/17th St & N Fairview St	Signalized	**0.913**	**E**	**0.913**	**E**	**0.914**	**E**	**0.917**	**E**
Westminster Ave & Mar Les Dr	SSSC[1]	**>120[2]**	**F**	**>120[2]**	**F**	**>120[2]**	**F**	**>120[2]**	**F**
W 16th St & N Fairview St	SSSC[1]	34	D	23	C	35	D	23	C

Note: Bold text indicates intersection operates at or above capacity (LOS E). Delay is reported for unsignalized intersections and V/C is reported for signalized intersection.

[1] SSSC = Side-street stop-controlled intersection

[2] Delay is reported as greater than 120 seconds due to limitations of the HCM methodology for side-street stop control intersections on multi-lane roadways with high-volume.

Source: Transportation Impact Analysis, Fehr & Peers (Appendix E)

At the Westminster Avenue/17th Street and North Fairview Street intersection, the V/C ratio would be increased by 0.001 and 0.003 during the AM and PM peak hour, respectively. The project would increase traffic volumes at the intersection by 0.5 percent in the AM and PM peak hours. The project would also add a small number of trips (11 in the AM, a 0.5 percent increase, and 18 trips in the PM, a 0.7 percent increase) to the Westminster Avenue and Mar Les Drive intersection. The

increase in delay is assumed to be negligible. Delay at the West 16th Street and North Fairview Street intersection would increase on average by one second during the AM peak hour and would continue to operate at LOS D with the addition of project traffic. No change is expected in delay or LOS during the PM peak hour.

Opening Year (2023) Plus Project

Traffic volume forecasts for Opening Year (2023) traffic conditions were developed by applying an annual growth rate of one percent per year to the adjusted traffic counts collected in 2020. To account for the increase in traffic from other development projects near the project site that have been approved but not yet constructed, trips from these projects were also added to the 2020 traffic volumes. Projects within a two-mile radius were included. As shown Table 24, all three of the study intersections are forecast to operate at or above capacity (LOS E or F) during at least one peak hour.

Table 24 Opening Year (2023) Plus Project Conditions

		Opening Year (2023)				Opening Year (2023) Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Control	Delay (s/veh)/ V/C	LOS	Delay (s/veh)/ V/C	LOS	Delay (s/veh)/ V/C	LOS	Delay (s/veh)/ V/C	LOS
Westminster Ave/17th St & N Fairview St	Signalized	**0.944**	**E**	**0.943**	**E**	**0.945**	**E**	**0.947**	**E**
Westminster Ave & Mar Les Dr	SSSC[1]	**>120[2]**	**F**	**>120[2]**	**F**	**>120[2]**	**F**	**>120[2]**	**F**
W 16th St & N Fairview St	SSSC[1]	**39**	**E**	24	C	**40**	**E**	24	C

Note: Bold text indicates intersection operates at or above capacity (LOS E). Delay is reported for unsignalized intersections and V/C is reported for signalized intersection.

[1] SSSC = Side-street stop-controlled intersection

[2] Delay is reported as greater than 120 seconds due to limitations of the HCM methodology for side-street stop control intersections on multi-lane roadways with high-volume.

Source: Transportation Impact Analysis, Fehr & Peers (Appendix E)

In 2023, the Westminster Avenue/17th Street and North Fairview Street intersection is still forecast to operate at LOS E during the AM and PM peak hour. The project is forecast to increase traffic volumes at this location by less than 0.5 percent. The addition of project traffic will contribute to a 0.001 increase in the V/C ratio for the intersection during the AM peak hour. During the PM peak hour, the V/C ratio is increased by 0.003 with the addition of project traffic, while LOS grade is unchanged. At the Westminster Avenue and Mar Les Drive intersection, operations are forecast to be worse than Existing conditions and still operate at LOS F (over 50 seconds of delay from the side-streets). However, as mentioned, the HCM methodology cannot consider the "Keep Clear" striping and gaps are anticipated to continue to provide left turn access at this intersection. The West 16th Street and North Fairview Street intersection is forecast to operate at LOS E by 2023 during the AM peak hour. With the addition of project traffic, delay is forecast to increase by one second. During the PM peak hour, the intersection operates at LOS C. Delay and LOS are unchanged with the addition of project traffic during the PM peak hour.

Cumulative Year (2045) Plus Project

To help determine future Cumulative Year (2045) traffic conditions, the TIA analysis assumes the following projects will be completed by 2045:

- The Fairview Street Widening and Bridge Replacement Project proposes to widen the Fairview Street crossing over the Santa Ana River from four lanes (two lanes in each direction) to six lanes (three lanes in each direction) between the intersections of 16th Street and 9th Street
- Consistent with the Orange County Master Plan of Arterial Highways, six lanes (three lanes in each direction) are assumed on Fairview Street
- A raised center median will be constructed concurrent with the Fairview Street Widening and Bridge Replacement Project that would restrict left turns in and out of 16th Street to and from Fairview Street
- The intersection of Mar Les Drive and Westminster Avenue is on the Traffic Signal Priority List and will be signalized

Traffic forecasts for Cumulative Year (2045) conditions were also developed by referencing the Orange County Traffic Analysis Model and historical travel patterns in the City. As no capacity enhancements on parallel facilities are planned, and no other programs that would result in this change in volume on Westminster Avenue, a growth rate of 0.5 percent per year was applied to 2020 traffic volumes in order to provide a conservative forecasting assessment. As shown in Table 25, all of the study and intersections are forecast to operate at or above capacity (LOS E or F) in year 2045. At all three intersections, the V/C and delay in the AM are unchanged with the project. In the PM, the V/C and delay are forecast to decrease. This decrease is associated with the lower trip generation of the proposed residential use compared to the commercial use assumed in the analysis to occur by 2045.

Table 25 Cumulative Year (2045) Plus Project Conditions

		Cumulative Year (2045)				Cumulative Year (2045) Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	Control	Delay (s/veh)/ V/C	LOS	Delay (s/veh)/ V/C	LOS	Delay (s/veh)/ V/C	LOS	Delay (s/veh)/ V/C	LOS
Westminster Ave/17th St & N Fairview St	Signalized	**1.129**	**F**	**1.176**	**F**	**1.129**	**F**	**1.106**	**F**
Westminster Ave & Mar Les Dr	Signalized	0.671	B	0.556	A	0.671	B	0.555	A
W 16th St & N Fairview St	SSSC[1]	**75.6**	**F**	26.5	D	**76.0**	**F**	26.4	D

Note: Bold text indicates intersection operates at or above capacity (LOS E). Delay is reported for unsignalized intersections and V/C is reported for signalized intersection.

[1] SSSC = Side-street stop-controlled intersection

[2] Delay is reported as greater than 120 seconds due to limitations of the HCM methodology for side-street stop control intersections on multi-lane roadways with high-volume.

Source: Transportation Impact Analysis, Fehr & Peers (Appendix E)

The intersection of Westminster Avenue/17th Street and North Fairview Street is forecast to operate at LOS F in Cumulative Year (2045) conditions, even with the assumed intersection improvements. The intersection of Westminster Avenue and Mar Les Drive is forecast to operate at LOS B or better as a signalized intersection in 2045. West 16th Street and North Fairview is forecast to operate at LOS F by 2045 during the AM peak hour due to the high volume on North Fairview Street limiting gaps for side-street traffic to turn right onto North Fairview Street. Similar to the intersection of Westminster Avenue and Mar Les Drive, the intersection of Westminster Avenue/17th Street and North Fairview Street is anticipated to meter traffic and provide gaps.

According to the LOS intersection analysis results, the project is not forecast to contribute a significant change in traffic operations at the study intersections when compare to baseline Existing, Opening Year (2023), and Cumulative Year (2045) traffic conditions.

Queueing

A queueing assessment was completed to evaluate if queueing in dedicated left-turn pockets would exceed available storage. Detailed assessment results and tabulations are included in the TIA in Appendix E.

Existing (2020) Plus Project

During the PM peak hour, the addition of project trips is forecast to increase the maximum queue for the eastbound left-turn/U-turn movement at the Westminster Avenue/17th Street and North Fairview Street by 35 feet (the length of approximately two vehicles) when compared to Existing traffic conditions. While there is median right-of-way available to extend the turn-pocket for the eastbound left-turn/U-turns by up to 150 feet, this would extend the left-turn pocket past the North Huron Drive intersection which is currently marked “Keep Clear”. Extension of the turn-pocket would make it harder for vehicles turning from North Huron Drive to access the turn lane to make a U-turn, which is the only option for drivers attempting to travel westbound on Westminster Avenue. Nonetheless, the addition of project traffic is not estimated to result in a substantial increase for any turning movements or vehicle queues when compared to Existing traffic conditions.

Opening Year (2023) Plus Project

In 2023, the average and maximum queues are anticipated to lengthen. During the PM peak hour, the addition of project trips in forecast to increase the maximum queue for the eastbound left-turn/U-turn movement at the Westminster Avenue/17th Street and North Fairview Street by 35 feet (the length of approximately two vehicles) when compared to Opening Year (2023) traffic conditions. As with Existing (2020) Plus Project traffic conditions, the addition of project traffic is not estimated to result in a substantial increase for any turning movements or vehicle queues when compared to Opening Year (2023) traffic conditions.

Cumulative Year (2045) Plus Project

By 2045, queueing for the eastbound left-turn/U-turn at Westminster Avenue/17th Street and North Fairview Street is forecast to exceed the available storage during the AM and PM peak hour. The addition of project trips is forecast to extend the queue by 20 feet (the length of approximately one vehicle) in the AM when compared to Cumulative Year (2045). However, queues are expected to decrease in the PM with the change in land use from residential to commercial. The lower trip generation associated with the project is also forecast to decrease the westbound left-turn

queue by 10 to 15 feet under the Plus Project scenario at the intersection of Westminster Avenue and Mar Les Drive. However, this pocket is still not forecast to provide enough storage capacity in the AM peak hour with the reduction in queue associated with the project. These two turn pockets are back-to-back. Either turn pocket could be extended by approximately 150 feet in order to accommodate the forecast queues. Nonetheless, the addition of project traffic is not estimated to result in a substantial increase for any turning movements or vehicle queues. Project-specific queueing impacts would be less than significant.

Recommendations

Based on the LOS and queueing analysis, the TIA includes the following recommendations for the three study intersections:

- **Westminster Avenue at North Fairview Street.** The intersection of Westminster Avenue at North Fairview Street currently operates at LOS E and is forecast to operate at LOS F under future conditions. The Orange County Master Plan of Arterial Highways designates Fairview Street as a Major Arterial that provides three lanes in each direction. Adding the additional through lanes at the intersection of Westminster Avenue at North Fairview Street would improve operations to LOS D or better under Existing Conditions. However, the intersection is forecast to degrade to LOS F by 2045. The queues in the westbound left-turn pocket are forecast to extend past available capacity. The turn-pocket could be extended by up to 150 feet to accommodate future conditions. The project's fair share contribution towards these improvements would be 0.5 percent.
- **Mar Les Drive at Westminster Avenue.** The intersection of Mar Les Drive at Westminster Avenue currently operates at LOS F and meets warrant for a traffic signal during the AM peak hour. This intersection is also on the Santa Ana Signal Priority List. Signalizing this intersection would improve operations to LOS B or better during the peak hours. The queues in the eastbound left-turn pocket are forecast to extend past available capacity. The turn-pocket could be extended by up to 150 feet to accommodate future conditions. However, there is not space available to extend both left-turn pockets since they are back-to-back. The project's fair share contribution towards these improvements would be 0.7 percent.
- **West 16th Street at North Fairview Street.** The intersection of West 16th Street at North Fairview Street is forecast to operate at LOS E under 2023 conditions. The addition of a center median would restrict left turns at the intersection and would improve operations. The project's fair share contribution towards this improvement would be 0.7 percent. However, by 2045 the intersection is forecast to degrade to LOS F in the AM due to delays for vehicles turning right onto Fairview Street. While this intersection meets peak hour signal warrant, a traffic signal is not recommended at this location due to the close proximity to the adjacent traffic signal at Westminster Avenue at North Fairview Street.

Neighborhood Intrusion Assessment

The purpose of this analysis is to estimate the potential impact the project may have on the surrounding residential streets due to the increase in traffic. Some project trips are anticipated to utilize the residential streets of West 16th Street and North Huron Drive to access the project site since access from Westminster Avenue is restricted to right-in/right-out by a raised median. It should be noted that a raised median is anticipated concurrent with the Fairview Bridge Widening project. This will restrict left turns in and out of 16th Street and is anticipated to divert trips towards Westminster Avenue away from the neighborhood. As determined in the TIA, the project is

estimated to add 83 trips per day to the residential neighborhood, including approximately three trips in the AM and nine trips in the PM peak hour.

Neighborhood ADT Capacity

The City of Santa Ana and the Orange County Master Plan for Arterial Highways (MPAH) have not defined capacities for local roadways. Few agencies have defined local residential roadway capacities because the capacity varies based on a variety of factors related to roadway design, as well as community expectations. The neighboring City of Garden Grove has conservatively determined that a reasonable upper limit for local residential roadways is 2,500 vehicles per day (vpd). The same capacities were used to analyze the existing residential streets near the project site before and after the addition of project traffic. See Appendix E for a detailed analysis. As determined in the TIA, both Huron Drive and 16th Street would operate below the upper limit of desirable volume, such that the addition of 83 project trips to the neighborhood would result in a less than significant from a capacity perspective.

Neighborhood Residential Street Impact

The City of Santa Ana does not have thresholds or guidelines specifically regarding the impact of a proposed project on residential streets. Therefore, the TIA utilizes the Los Angeles Department of Transportation (LADOT) established criteria to study to determine the potential impact of a proposed project. The two residential roadway segments North Huron Drive and West 16th Street were analyzed under Existing traffic conditions with the addition of project traffic. As concluded in the TIA, the project would not result in a substantial increase to the study residential roadway segments based on the LADOT's threshold of significance. See Appendix E for detailed criteria and analyses. Therefore, the project would have a less than significant impact on the adjacent residential streets.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Per the Santa Ana Traffic Impact Study Guidelines (2019), projects located in a Transit Priority Area (TPA) are determined to have the potential to reduce VMT per service population (SP) and result in a less-than-significant transportation impact. Appendix A of the City's guidelines was used to confirm the project is located within a TPA, indicating that the project is within a half-mile of a high-quality transit stop. A high-quality transit stop is a stop along a transit route that provides at least 15-minute headways. The Bravo 560 route runs on 12-minute headways and stops along Westminster Avenue approximately 100 feet from the project site. Furthermore, per the City's guidelines, projects located in a low-VMT generating Traffic Analysis Zone (TAZ) are determined to have the potential to reduce VMT/SP and result in a less than significant transportation impact. Appendix B of the City's guidelines was used to confirm the project is located in an area generating VMT/SP 15 percent below the Orange County average. A review of the SCAG RTP/SCS also confirms that the project land use is consistent with or would result in lower VMT/SP than the land use assumed for the RTP/SCS. The RTP/SCS land use assumed for the project site was commercial, consistent with the City's current General Plan land use designation and zoning. As affordable housing would be expected to generate a lower VMT/SP than a commercial use, no VMT assessment was required. In addition, though not specified in the City's guidelines, the Technical Advisory on Evaluating Transportation Impacts in CEQA (2018) recommends that affordable projects

should be screened from assessment and presumed to result in a less than significant impact (Appendix E). Therefore, the project would result in a less than significant impact related to VMT.

LESS THAN SIGNIFICANT IMPACT

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

Additional analysis was conducted as part of the TIA to understand how access to and from the project site would function, including other potential hazards related to the driveway entrance and adequate line-of-sight.

Site Access

Vehicle access is provided by one driveway from Westminster Avenue, which will be located 117 feet east of North Huron Drive and 329 feet west of the Westminster Avenue/17th Street and North Fairview Drive intersection. The driveway will be located 56 feet west of the existing turn-pocket for vehicles turning right on North Fairview Drive. The driveway will act as a side-street stop-controlled intersection and provide only right-in, right-out access. The analysis determined that the project driveway would operate at LOS C during the AM and PM peak hour under all Plus Project scenarios, indicating that the proposed driveway would accommodate all project trips.

Sidewalks on Westminster Avenue near the Project site are 10 feet wide, while sidewalks on North Huron Drive are 12 feet wide. The project will provide six-foot sidewalks on site connecting the proposed buildings to both North Huron Drive and Westminster Avenue. Therefore, sufficient pedestrian access would be provided to the project site.

No bicycle facilities are provided near the project site. The City of Santa Ana's Active Transportation Plan proposes a Class IV Cycle Track on Westminster Avenue near the project site; however, the project would not change or prohibit any proposed bicycle facilities.

There is a transit stop located 120 feet west of the project site on Westminster Avenue, providing riders access to eastbound routes. The westbound transit stop is located directly across Westminster Avenue from the project site. The project would not change or prohibit bus facilities or transit routes.

Driveway Length and Entrance

Drivers would be able to access the site from a driveway that is 210 feet long and provides access to parking near the Project entrance. The driveway would connect to the 136 parking spaces provided in the parking lot. The length of the driveway would be sufficient to accommodate the small number of trips resulting from the project, resulting in no impacts to the surrounding roadway network.

Sight Distance

American Association of State Highway and Transportation Officials guidelines were used to evaluate the sight distance requirements for vehicles exiting the project site by turning right onto Westminster Avenue. When making a right-turn at intersection onto a roadway with a design speed of 40 miles per hour, the driver must be able to clearly see feet (sight distance) to their left in order to safely complete the movement. The area adjacent to the driveway that should be kept clear to provide enough visibility for the driver to proceed with a right-turn. Vegetation over 30 inches should be reduced or removed within the shared areas shown on the figure. Sight triangles indicate

obstruction of visibility by existing landscape elements. The project does not include any additional vegetation on the sidewalk that may cause visual obstructions. Nonetheless, the TIA recommends that the existing landscape elements be removed.

Traffic Safety

As discussed in the intersection operations analysis under impact discussion *a.* of this section, the increase in traffic due to the project is minimal and there are no significant changes to the performance at any study intersections. The addition of project trips increases intersection volumes at study intersections by approximately half a percent. The small increase in traffic is not anticipated to exacerbate any safety conditions at nearby intersections. There could be a slight increase in pedestrian activity at Westminster Avenue and Fairview Street, but because the intersection is already signalized with protected left-turn phases, which provide protected pedestrian crossing movements, the infrastructure already in place is sufficient to manage traffic operations at this intersection.

The project would result in a less than significant impacts related to traffic hazards or other safety issues.

LESS THAN SIGNIFICANT IMPACT

d. Would the project result in inadequate emergency access?

During construction, temporary and occasional lane closures may be required, however two-way traffic would still be maintained at construction entry points. Implementation of the project would not create new obstructions to emergency access in the project area. In addition, the project would not result in inadequate emergency access because it would be subject to OCFA review of site plans, site construction, and the actual structures prior to occupancy to ensure that required fire protection safety features, including building sprinklers and emergency access, are implemented. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

18 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 a PRC Section 21074 as either a site, feature, place, or 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 PRC 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	■	☐	☐

As of July 1, 2015, California Assembly Bill 52 of 2014 (AB 52) was enacted and expands CEQA by defining a new resource category, "tribal cultural resources." AB 52 establishes that "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or
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 PRC Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. Under

AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074 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 PRC Section 5020.1(k)?

The project site is currently an unoccupied, vacant lot that had historically been developed with commercial/retail uses and parking areas that have since been demolished. As shown on the aerial view in Figure 2 and site photographs in Figure 3, the site predominately consists of vegetation, including three mature trees, with some asphalt paving, a billboard and concrete foundations on the eastern side of the site. As discussed in Section 5, *Cultural Resources*, the site has been extensively disturbed from previous construction and demolition activities. Due to this previous ground disturbance, there is low probability of encountering on-site tribal cultural resources throughout project construction.

The City of Santa Ana sent a Local Government Tribal Consultation List Request to the NAHC to obtain a list of Native American tribes with jurisdiction in the project area. The NAHC responded to the City's request on August 20, 2020 with a consultation list of 17 tribes to contact because of their traditional and cultural affiliation with the geographic area in which the project is located. Based on this list, and per PRC Section 21080.3.1., the City sent consultation request letters on August 26, 2020 to the 17 tribes and have since received responses from the Juaneño Band of Mission Indians, Acjachemen Nation - Belardes and Gabrieleño Band of Mission Indians - Kizh Nation, requesting consultation to discuss the project in further detail. Following these requests, a consultation phone call between Joyce Stanfield Perry, representative of the Acjachemen Nation – Belalrdes, and City staff occurred on October 13, 2020. Due to the shell finding within a 0.5-mile radius of the APE and site proximity to the Santa Ana River, the Acjachemen Nation – Belalrdes indicated the potential to encounter resources during ground-disturbing activities. Furthermore, a consultation phone call between Chairman Andrew Salas and Matthew Teutimez , representatives of the Kizh Nation, and City Staff on October 28, 2020 also indicated the potential to encounter unanticipated resources during ground-disturbing activities due to the site's history and proximity to the Santa Ana River.

Given the developed nature of the site, excavation and grading activities required for project construction are not expected to uncover tribal cultural resources. However, it is possible that intact and previously undiscovered tribal cultural resources are present at subsurface levels and could be uncovered during ground-disturbing activities. In the event such previously unknown tribal cultural resources are found, significant effects may occur to that resource if the resource is disturbed, destroyed, or otherwise improperly treated. As such, Mitigation Measures TCR-1 and TCR-2 are required to minimize impacts to tribal cultural resources during construction. Implementation of Mitigation Measures TCR-1 and TCR-2 would reduce potential impacts to tribal cultural resources to a less than significant level.

TCR-1 Tribal Cultural Resource Construction Monitoring

Prior to the issuance of any permits for initial site clearing (such as pavement removal, grubbing, tree removals) or issuance of permits allowing ground-disturbing activities that cause excavation to depths greater than artificial fill (including boring, grading, excavation, drilling, potholing or

auguring, and trenching), the City of Santa Ana shall ensure that the project applicant/developer retain qualified Native American Monitor(s) with ancestral ties to the project area and approved by the tribe(s) that consulted on this project pursuant to AB 52 (the "Tribe(s)" or "Consulting Tribe(s)"). A copy of the executed contract shall be submitted to the City of Santa Ana Planning and Building Department. The Monitor(s) will only be present on-site during initial site clearing and construction that involves ground-disturbing activities. Ground-disturbing activities are defined as activities that may include, but are not limited to, pavement removal, potholing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Monitor(s) will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when all ground-disturbing activities on the project site are completed, or when the archaeologist and Native American Monitor(s) have indicated that all upcoming ground-disturbing activities at the project site have little to no potential for impacting tribal cultural resources..

TCR-2 Unanticipated Discovery of Tribal Cultural Resources

In the event that tribal cultural resources are inadvertently discovered during ground-disturbing activities, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 100 feet) until the find can be assessed by the qualified archaeologist and Native American Monitor(s) approved by the Consulting Tribe(s). If the resources are Native American in origin, the Consulting Tribe(s) will retain it/them in the form and/or manner the Tribe deems appropriate, for educational, cultural and/or historic purposes.

If human remains and/or grave goods are discovered or recognized at the project site and are determined to be Native American in origin, the NAHC shall be notified and a MLD shall be designated. The MLD shall work with the developer and the City to determine the treatment of the human remains and any grave/burial goods. Human remains and grave/burial goods shall be treated alike per PRC Section 5097.98(d)(1) and (2). Work may continue on other parts of the project site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]).

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC 21074 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 PRC Section 5024.1?

There are no known tribal cultural resources at the project site. However, as described under impact discussion *a.* of this section, the potential for previously undiscovered cultural resources to be uncovered during ground-disturbing activities, while unlikely, cannot be completely ruled out. If such resources are found and are determined to be significant under PRC Section 5024.1, the project could result in significant impacts to such resources if they are disturbed, destroyed, or otherwise improperly treated. Mitigation Measure TCR-2 would ensure that any subterranean tribal cultural resources encountered during construction activities for the proposed project are properly handled and treated. With implementation of Mitigation Measure TCR-1 and TCR-2, impacts to tribal cultural resources would be less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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19 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. 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?

c. 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?

The project site is in an urbanized area of the city and is well-served by existing utilities infrastructure. Wastewater generated from the project site is collected by the City's local wastewater collection system and is then conveyed to the Orange County Sanitation District's

(OCSD) trunk mainlines for conveyance and treatment. OCSD is responsible for safely collecting, treating, and disposing of wastewater generated by users in its service area, which encompasses an approximately 479-square-mile service area, with a population of approximately 2.6 million people. OCSD currently operates two wastewater treatment facilities that accommodate wastewater from residential, commercial, and industrial sources. Reclamation Plant No. 1, located in the City of Fountain Valley, is adjacent to the Santa Ana River. Reclamation Plant No. 2 is also located in the City of Huntington Beach, at the mouth of the Santa Ana River. The treatment facilities receive approximately 185 million gallons per day (mgd) of wastewater for treatment (OCSD, n.d.).

Conservatively assuming that wastewater generation would be approximately 100 percent of water demand, which is based on CalEEMod results (Appendix A), the proposed project would generate approximately 7,921,880 gallons of wastewater per year, or 21,704 gallons of wastewater per day. The project's estimated daily wastewater generation would account for an estimated 0.01 percent increase above the 185 million gallons of wastewater treated daily by OCSD. Therefore, the OCSD would have sufficient capacity to accommodate additional wastewater flows generated by the proposed project, the proposed project would not require the construction of new or expanded treatment facilities.

The project site would continue to connect to the existing storm drain system operated and maintained by the City. As discussed in Section 10, *Hydrology and Water Quality*, the project would increase the amount of impervious surface on the site than compared to existing conditions. However, the project includes the incorporation of stormwater filtration vaults would ensure stormwater is captured and treated on the project site prior to conveying to existing off-site storm drain systems. The proposed capacity of the filtration vault was determined to be adequate for detaining the necessary volumes to reduce storm peak runoff flows to existing site runoff levels (Appendix E). The project would not result in flood on- or off-site, would not impede or redirect flood flows, and would not create or contribute runoff in excess of existing off-site storm drain capacities. Therefore, the project would not necessitate the construction of new stormwater drainage facilities or expansion of existing facilities.

Furthermore, as discussed in Section 6, *Energy*, the project would not result in the wasteful, inefficient or unnecessary consumption of energy. Project operation would consume approximately 0.37 GWh of electricity per year. The project's electricity demand would be served by SCE, which supplied 85,275 GWh of electricity to its service area in 2018 (CEC 2018a). The project's electricity demand would represent less than 0.001 percent of electricity provided by SCE. Therefore, SCE would have sufficient supplies for the project. Estimated natural gas consumption for the project would be 0.01 million U.S. therms (MMthm) per year (Appendix A). The project's natural gas demand would be serviced by the Southern California Gas Company (SoCal Gas), which provided 5,156 MMthm per year in 2018 (CEC 2018b). The project's natural gas consumption would represent less than 0.001 percent of natural gas provided by SoCal Gas, which would be adequate to serve the project. Therefore, the project would not require the construction of new electric power or natural gas facilities. Likewise, the project site is an infill project served by existing telecommunications facilities within the city and would not require the expansion or construction of new telecommunications infrastructure.

The project would not result in significant environmental impacts due to the construction of new utility facilities and the project would be served by a wastewater treatment plant with adequate capacity. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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?

As discussed in Section 10, *Hydrology and Water Quality*, the project site receives its water service from the OCWD, which is a retail water supplier that serves the City of Santa Ana and a small neighborhood in the City of Orange, near Tustin Avenue and Fairhaven Avenue to the northeast. According to the 2015 Urban Water Management Plan (UWMP), Santa Ana would have an adequate supply of water, with normal conservation efforts, to meet projected demand through 2040 in average year, single dry year, and multiple dry year scenarios (Santa Ana 2016). Table 26 shows projected water supply and demand through 2040 according to the 2015 UWMP.

Table 26 Normal Year Water Supply and Demand Comparison

	2015	2020	2025	2030	2035	2040
Water Supply Totals	37,007	36,998	39,717	39,989	39,978	40,036
Water Demand Totals	36,656	36,998	39,717	39,989	39,978	40,036

Note: Water supply and demand totals are reported in acre-feet per year (AFY).

Source: OCWD 2015 Urban Water Management Plan, 2016

According to CalEEMod results (see Appendix A), the project would demand an increase of 21,704 gallons of water per day, or approximately 24 acre-feet per year (AFY) of water. This increase is within the forecasted increase in water demand for the City shown in Table 26.

The project would be required to be constructed in accordance with all applicable CBC standards, including those that mandate water-efficient fixtures and features and also would be mandated to adhere to applicable water conservation measures for landscaping. Existing water infrastructure and supplies would be adequate to serve the anticipated residents and other users of the proposed project, the project's impact on water supply would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project 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. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The City contracts with Waste Management to provide trash, recycling, and special pickup services for residents. After collection, waste is conveyed to the Frank R. Bowerman Landfill in Irvine, which has a total permitted capacity of 2.66 million cubic yards and a remaining capacity of 2.05 million cubic yards of solid waste. The landfill has a permitted maximum capacity of 11,500 tons per day (CalRecycle 2019).

According to the CalEEMod results (see Appendix A), operation of the proposed project would generate approximately 39 tons of solid waste per year, which would account for approximately 0.1 tons of solid waste per day or 0.001 percent of the estimated daily capacity of 11,500 tons at Frank R. Bowerman Landfill. Therefore, the project's impacts on solid waste would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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20 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 downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	■

Fire Severity and Risk

Orange County features a combination of climate types, ranging from hot summer Mediterranean and hot semi-arid in the Valley region to hot desert in many other locations. The entire County is susceptible to extremely hot and dry summers. While wildfire can start from both natural and human ignitions, climate change is expected to exacerbate wildfire risk by creating hotter and drier landscapes more susceptible to burning. Droughts are expected to become more frequent and intense in Orange County. The largest increase in wildfire risk may occur in communities near the Santa Ana Mountains in and adjacent to the Mountain region. The city is also subject to extremely strong winds, commonly referred to as “Santa Ana Winds,” which can reach speeds of more than 40 miles per hour (Santa Ana 2020a).

While a natural ecological process in coastal chaparral and forest systems, wildfire return intervals have decreased throughout southern California, resulting in more frequent ecological disturbance, loss of biodiversity, and colonization by non-native grass species (United States Forest Service 2018). Furthermore, post-fire conditions leave exposed mountain slopes and hillsides vulnerable to surface

erosion and runoff. Debris flows during post-fire rainy seasons can pose a risk to life and property and occur with little warning. In southern California, as little as 0.3 inch of rain in 30 minutes can produce debris flows on post-fire landscapes (United States Geological Survey 2018).

The City of Santa Ana is in a highly urbanized area of Orange County, which limits the spread of large, uncontrolled wildfires. The project site is undeveloped in an area with residential, commercial, and industrial uses. The project site is not located in a designated Very High Fire Hazard Severity Zone (VHFHSZ) or a State Responsibility Area (SRA). The nearest Fire Hazard Severity Zone (FHSZ) in an SRA is located approximately four miles east of the city along the western edge of Loma Ridge. The nearest FHSZ in a Local Responsibility Area (LRA) is about 3.8 miles at the southern tip of the Peters Canyon Regional Park (Santa Ana 2020a).

Fire and Emergency Services and Programs

As discussed under Section 15, *Public Services*, the OCFA Battalion 9 provides fire protection and emergency services to Santa Ana. The nearest fire stations to the project site are OFCA Station 71 and Station 73 located approximately 1.5 driving miles east and two driving miles southeast, respectively, of the project site. Access to the project site would be provided by local roadways, SR-22, and I-5. The Wildland Section of the OCFA Special Operations Division consists of hand crew firefighters and Heavy Fire Equipment Operators that are skilled at Fire Hazard Fuels reduction and wildfire suppression tactics. These specialized firefighters assist the fire suppression forces that are assigned to traditional fire stations. The Heavy Fire Equipment Operations program uses bulldozers and other specialized equipment to aid in fire suppression, emergency flood mitigation, and hazardous fire fuel reduction when needed. The OCFA also provides training programs along with emergency medical education (OCFA 2020).

The City's Municipal Utilities and Engineering Department is a member of the Emergency Response Network of the Inland Empire (ERNIE), which facilitates public agency preparedness for, response to, and recovery from local and regional disasters to ensure the delivery of critical public services through mutual aid, communications, and compliance with state and federal emergency standards (East Valley Water District 2020).

Fire Code Regulations

The California Building Standards Commission developed the California Fire Code as part of Title 24, Part 9 of the California Code of Regulations. The California Fire Code establishes building and equipment design features for all buildings and occupancies, installation or maintenance of associated infrastructure, and access to emergency services to limit risks associated with fires (California Building Standards Commission 2016).

The City adopted the California Fire Code with amendments due to climatic, geological and topographical conditions including low precipitation and high temperatures, extremely strong "Santa Ana Winds," location of earthquake faults, and traffic congestion. Amendments to the California Fire Code regard the following issue areas: high fire hazard areas; water supplies; fire extinguishing systems and sprinkler systems; and the storage, handling, and use of flammable and combustible liquids and hazardous materials.

The California Fire Code, as amended by the City, establishes regulations affecting or relating to structures, processes, premises, and safeguards regarding:

- Conditions affecting the safety of the firefighters and emergency responders during emergency operations

- Fire hydrant systems, water supply, fire equipment access, posting of fire equipment access, parking, lot identification, weed abatement, and combustible brush and vegetation that represents an imminent fire hazard, debris abatement, combustible storage abatement including flammable liquid storage, and hazardous material storage and use (Santa Ana 2020a).

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The project site is not located within or near a California Department of Forestry and Fire Protection (CAL FIRE) recommended VHFHSZ or SRA. Site access for the project would be provided via Westminster Avenue. As discussed in Section 9, *Hazards and Hazardous Materials*, and Section 17, *Transportation*, the project would not impede access to emergency services. The project would be designed, constructed, and operated pursuant to applicable standards outlined in the 2020 California Fire Code, as amended by the City and adopted in SAMC Chapter 14. Such requirements include building and emergency access, adequate emergency notification, and means of egress for emergency vehicles.

While project construction may require temporary truck and equipment access and parking on and around the project site, construction would not require lane or roadway closures that would temporarily impair emergency response or evacuation. Therefore, there would be no impact.

NO IMPACT

b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, 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?

d. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

As discussed under impact discussion *a.* of this section, the project is not located in or near a designated VHFHSZ, would not be situated near slopes or create slopes. Furthermore, there are no streams or rivers located on or adjacent to the project site, and the project site and surrounding areas are not at high risk of downslope or downstream flooding or landslides. Therefore, the project would not exacerbate wildfire risks, and risks to people or structures due to runoff, post-fire slope instability, or drainage changes would not occur. The project would adhere to applicable standards outlined in the 2016 California Fire Code, as amended by the City to increase prevention and protection efforts due to impacts from the “Santa Ana Winds” and other conditions that may increase the propensity and intensity of wildfires. Therefore, the project would not exacerbate wildfire risks, and would not expose occupants to pollutant concentrations or the uncontrolled spread of wildfire. No impact would occur.

NO IMPACT

c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project 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?

As discussed under impact discussion *a.* of this section, the project is not located in or near a designated VHFHSZ. As discussed in Section 19, *Utilities and Service Systems*, the project would not result in significant environmental effects associated with the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. The project would require installation of additional water and sewer laterals or appurtenances to serve the proposed buildings and landscaping. New or relocated utilities and systems associated with the project would comply with state and local fire codes to reduce the risk of fires, and none of these potential infrastructure improvements would exacerbate fire risk on-site. No impact would occur.

NO IMPACT

21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. 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. 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. 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?

As discussed in Section 4, *Biological Resources*, there are no mapped essential habitat connectivity areas in the immediate vicinity of the project site. In addition, regional wildlife movement is restricted given the built-out nature of the project area, and no native resident or migratory fish or wildlife species, established native resident or migratory wildlife corridors, or native wildlife nursery sites exist on or immediately around the project site. However, the site currently contains mature trees which may provide nesting habitat for birds. Therefore, Mitigation Measure BIO-1 would require a pre-construction nesting bird survey and other measures should construction occur during

the breeding season to avoid potential impacts to on-site nesting birds. Furthermore, as discussed in Section 5, *Cultural Resources*, Section 7, *Geology and Soils*, and Section 18, *Tribal Cultural Resources*, the proposed project would have a less than significant impact on unanticipated cultural resources, paleontological resources, and tribal cultural resources with implementation of Mitigation Measures CR-1, CR-2, GEO-1, TCR-1, and TCR-2. Implementation of these mitigation measures, as well as adherence to existing local, State and federal regulations and specific monitoring procedures related to the discovery of any unanticipated cultural resources, paleontological resources, tribal cultural resources, and human remains during construction activity, would reduce these potential impacts to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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)?

As concluded in Sections 1 through 20, the project would have no impact, a less than significant impact, or a less than significant impact with mitigation incorporated, with respect to all environmental issues considered in this document. As indicated in the TIA prepared for the project (see Appendix E), other pending or approved future development in the project site vicinity predominantly consists of residential and retail/commercial development, including mixed-uses. Given the distance to the nearby projects, impacts associated with implementation of the residential and retail/commercial development could be cumulatively considerable to those of the proposed project. However, cumulative impacts related to several other resource areas have been addressed in the individual resource sections of this IS-MND, including air quality, GHGs, noise, and transportation (see CEQA Guidelines Section 15064(h)(3)).

As discussed in Section 1, *Air Quality*, and Section 7, *Greenhouse Gas Emissions*, the proposed project would result in less than significant impacts associated with air quality and GHG emissions. The impact analyses in these sections use thresholds that already account for cumulative (regional) impacts, except for cumulative localized impacts of construction emissions. However, the grading phase accounts for most of the emissions with localized impacts and for which LST impact thresholds exist, including NO_X, CO, PM_{10}, and $PM_{2.5}$. In addition, as concluded in Sections 1 and 7, air quality and GHG emissions associated with operation and construction would be less than significant and not be cumulatively considerable.

As discussed in Section 13, *Noise*, the proposed project would not generate significant construction noise impacts as construction would not occur between the hours of 8:00 PM and 7:00 AM on weekdays. Therefore, impacts associated with implementation of this development in conjunction with those of the project would not be cumulatively considerable. The noise and traffic analyses both considered increases in traffic and traffic noise under Existing plus Project conditions and concluded that impacts would be less than significant.

This analysis determined that, for some of the other resource areas (e.g., agricultural and mineral), the proposed project would have no impact in comparison to existing conditions. Therefore, the project would not contribute to cumulative impacts related to these issues. Other issues (e.g., biological resources, cultural resources, geology, hazards, hazardous materials, and tribal cultural resources) are by their nature project specific and impacts at one location do not add to impacts at other locations or create additive impacts. As such, cumulative impacts would be less than significant (not cumulatively considerable).

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in analyses for air quality, hazards and hazardous materials, and noise, the proposed project would not result, either directly or indirectly, in adverse hazards related to air quality, hazardous materials or noise. Compliance with applicable rules and regulations stated in this analysis would reduce potential impacts on human beings to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

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