DRAFT ENVIROMENTAL IMPACT REPORT

Imperial Avalon Mixed-Use Project

SCH# 2021010116
August 2022

Prepared for:

City of Carson
Community Development
Department, Planning Division
701 East Carson Street
Carson, CA 90745

CONTACT:
Gena Guisar
Senior Planner



Prepared by:

DUDEK

38 N. Marengo Avenue
Pasadena, CA 91101

CONTACT:
Jason Reynolds
Project Manager

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38 North Marengo Avenue
Pasadena, California 91101
Contact: Jason Reynolds, Project Manager

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
µg/m^3	micrograms per cubic meter
AB	Assembly Bill
ABC	America's Beautiful Cities Corporation
ACM	asbestos-containing material
ADT	average daily traffic
AEC	Advantage Environmental Consultants, LLC
AF	acre-feet
AFY	acre-feet per year
APN	Assessor's Parcel Number
Applicant	Imperial Avalon LLC
AQMP	Air Quality Management Plan
bgs	below ground surface
BMP	best management practice
BTU	British thermal unit
BUG	backlight, up light, and glare
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal Water	California Water Service Company
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDWR	California Department of Water Resources
CEC	California Energy Code
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFD	Community Facilities District
CFC	chlorofluorocarbon
cfs	cubic feet per second
CGS	California Geological Survey
CH_4	methane
CHRIS	California Historical Resources Information System
City	City of Carson
CIWM	California Integrated Waste Management
CMC	Carson Municipal Code
CNEL	Community Noise Equivalent Level
CO	carbon monoxide

Acronym/Abbreviation	Definition
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of Los Angeles
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DDT	dichlorodiphenyltrichloroethane
DOT	United States Department of Transportation
DPM	diesel particulate matter
DPW	Department of Public Works
DTSC	California Department of Toxic Substances Control
du/ac	dwelling units per acre
EECAP	Energy Efficiency Climate Action Plan
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
EPA	U.S. Environmental Protection Agency
EV	electric vehicle
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FTA	Federal Transit Administration
GHG	greenhouse gas
gpd	gallons per day
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HFC	hydrofluorocarbon
HHMD	Health Hazardous Materials Division
HMBP	Hazardous Materials Business Plan
HVAC	heating, ventilation, and air conditioning
I	Interstate
IASP	Imperial Avalon Specific Plan
IDIF	Interim Development Impact Fee
IESNA	Illuminating Engineering Society of North America
IRWMP	Integrated Regional Water Management Plan
JWPCP	Joint Water Pollution Control Plant
LACDPW	Los Angeles County Department of Public Works
LACFCD	Los Angeles County Flood Control District
LACFD	Los Angeles County Fire Department
LACSD	Sanitation Districts of Los Angeles County
LASD	Los Angeles County Sheriff's Department
LAUSD	Los Angeles Unified School District
LBP	lead-based paint
L_{eq}	equivalent continuous sound level
LID	low-impact development
LOS	level of service

Acronym/Abbreviation	Definition
LST	local significance threshold
LTA	Local Transportation Assessment
M	Richter magnitude
mgd	million gallons per day
mg/kg	milligrams per kilogram
MLD	most likely descendant
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MS4	municipal separate storm sewer system
MW	megawatt
Mw	moment magnitude
MWh	megawatt-hour
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NB	northbound
NBL	northbound left
NHM	Natural History Museum of Los Angeles County
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyls
PDF	Project Design Feature
PFC	perfluorocarbon
PM_{10}	coarse particulate matter
$PM_{2.5}$	fine particulate matter
ppm	parts per million
PPV	peak particle velocity
PRC	California Public Resources Code
PRIMP	Paleontological Resources Impact Mitigation Program
Project	Imperial Avalon Mixed-Use Project
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
RFS	Renewable Fuel Standard
RHNA	Regional Housing Needs Assessment
RIR	Relocation Impact Report
ROG	reactive organic gas
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin

Acronym/Abbreviation	Definition
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SL	screening level
SLF	Sacred Lands File
SO_2	sulfur dioxide
SOx	sulfur oxides
SRA	Source Receptor Area
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAZ	Traffic Analysis Zone
TCR	tribal cultural resource
TDM	Transportation Demand Management
TMDL	total maximum daily load
TPH	total petroleum hydrocarbons
USC	United States Code
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
VOC	volatile organic compound
WBMWD	West Basin Municipal Water District
WSA	Water Supply Assessment

1 Executive Summary

1.1 Introduction

This Environmental Impact Report (EIR) has been prepared by the City of Carson (City) as the Lead Agency pursuant to the California Environmental Quality Act (CEQA) Public Resources Code 21000 et seq., and the State CEQA Guidelines (California Code of Regulations, Section 15000 et seq.). This EIR has been prepared to evaluate the environmental effects of the proposed Imperial Avalon Mixed-Use Project (Project). The purpose of this EIR is to focus the discussion on the Project's potential effects on the environment, which the lead agency has determined may be significant. In addition, feasible mitigation measures are recommended, when applicable, that could reduce significant environmental impacts or avoid significant environmental impacts. Per the requirements of Section 15123 of the State CEQA Guidelines, an EIR shall contain a summary of the proposed actions and its consequences. The language in the summary should identify:

> (1) Each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect (see Sections 1.3 through 1.6);
>
> (2) Areas of controversy known to the Lead Agency including issues raised by agencies and the public; and (see Section 1.7);
>
> (3) Issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects (see Section 1.8).

1.2 Project Overview

The Project involves (1) the adoption of the Imperial Avalon Specific Plan (IASP), which would establish a new regulating plan within the IASP area (Project site) and allow for the development of residential, commercial, recreational/open space uses, and (2) implementation of the IASP through the development of a specific development proposal, which involves relocation or disposal of existing mobile home coaches, demolition of other existing on-site structures, and the development of a mixed-use neighborhood containing multifamily residences, townhomes, neighborhood-serving commercial uses, open space and recreation opportunities, and associated parking areas. Collectively, the IASP and implementation of the specific development proposal constitute the Project analyzed in this EIR and are referred to as the "Project." Thus, The Project, as evaluated in this Draft EIR, would involve (1) a General Plan Amendment to change the Project site's General Plan Land Use Designation from Regional Commercial and Low Density Residential to Urban Residential, (2) a zone change to change the Project site's zoning from Commercial, Automotive and RM-8-D zone to Specific Plan, (3) adoption of the IASP, (4) site plan and design review and (5) a tentative tract map to facilitate the construction of the proposed development, and (6) approval of a development agreement.

1.3 Impacts Determined to be Significant

The Project's potential environmental impacts are summarized in Table 1-1, pursuant to State CEQA Guidelines Section 15123(b)(1). For more detailed discussion, please see Chapter 4 of this document. Table 1-1 contains a summary of the impacts described in this EIR. Table 1-1 also includes a list of the proposed mitigation measures that are recommended in response to the Project's potentially significant impacts, as well as a determination of the level of significance of the impacts after implementation of the recommended mitigation measures. Impacts associated with construction noise was identified as being significant and unavoidable.

1.4 Impacts Not Found to be Significant

As discussed in the Notice of Preparation (Appendix A-1), the Project is not anticipated to result in significant impacts to the following topical areas: Agriculture and Forestry Resources; Biological Resources; Mineral Resources; and Wildfire. Nevertheless, these topics are briefly discussed in Section 5, Other CEQA Considerations of this Draft EIR.

1.5 Summary of Environmental Impacts and Mitigation Measures

Table 1-1, Summary of Environmental Impacts and Mitigation Measures, provides a summary of the impact analysis related to the Project. Table 1-1 identifies a summary of the significant environmental impacts resulting from the Project pursuant to the CEQA Guidelines Section 15123(b)(1). For more detailed discussion, please see Chapter 4 of this Draft EIR. Table 1-1 lists the applicable mitigation measures related to potentially significant impacts, as well as the level of significance after mitigation.

1.6 Summary of Project Alternatives

CEQA requires that EIRs "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives" (14 CCR 15126.6[a]). The CEQA Guidelines direct that the selection of alternatives be governed by "a rule of reason" (14 CCR 15126.6[a] and [f]).

As presented in this Draft EIR, the Project would not result in significant and unavoidable impacts after implementation of all mitigation measures, with the exception of the following:

- The Project would result in a significant and unavoidable short-term construction noise

An EIR is required to identify any alternatives that were considered by the lead agency but were rejected as infeasible. Among the factors described by CEQA Guidelines Section 15126.6 in determining whether to exclude alternatives from detailed consideration in an EIR are failure to meet most of the basic objectives of the project, infeasibility, or inability to avoid significant environmental impacts. Alternatives that were considered but rejected for further consideration are discussed in Section 6, Alternatives. Section 6 also includes a detailed analysis of four alternatives to the proposed Project that were considered for further evaluation:

- Alternative 1A – No Project and Non-Operational Mobile Home Park Alternative
- Alternative 1B - No Project and Mobile Home Park Removal Alternative
- Alternative 2 – General Plan and Zoning Consistent Alternative
- Alternative 3 – Reduced Density and Sensitive Transition Alternative

The following sections provide summaries of these four alternatives. None of the four alternatives were determined to avoid the Project's sole significant and unavoidable short-term construction noise impact. Nonetheless,

Alternative 2 was determined to be the environmentally superior alternative because it would not result in impacts that are greater than those of the Project, it would further reduce the magnitude of many of the Project's already less-than-significant impacts, and would result in impacts that are lesser in magnitude than the other three alternatives. However, Alternative 2 would fail to meet almost all of the Project Objectives. Alternative 3 would be environmentally superior to the Project and would still meet all of the Project Objectives. See Section 6 for further discussion of the environmentally superior alternative.

1.6.1 Alternative 1A - No Project and Non-Operational Mobile Home Park Alternative

Alternative 1A assumes the Project would not proceed, no new permanent development or land uses would be introduced within the Project site, and the existing environment would be entirely maintained. No further actions would occur on the Project site, such as coach removal or demolition of existing structures and facilities. The existing Mobile Home Park would continue to occupy the Project site but would become non-operational and unoccupied, as the Park Owner has already begun the process of closing the Park (see Section 3.3, Environmental Setting, in Chapter 3 for further detail). Minimal maintenance and security activity at the Mobile Home Park is assumed after closure.

1.6.2 Alternative 1B – No Project and Mobile Home Park Removal Alternative

Alternative 1B assumes the Project would not proceed and no new permanent development or land uses would be introduced within the Project site but that additional actions associated with closure of the Mobile Home Park closure would occur, such as coach removal and demolition of existing structures and facilities. It is assumed that coach pads and pavement would be left on site and the site would consist of a vacant, mostly paved lot. Minimal maintenance and security activity at the Park is assumed after closure.

1.6.3 Alternative 2 – Development Consistent with Existing General Plan/Zoning

The Project site is currently comprised of a closed Mobile Home Park, which is in conflict with existing zoning and land use designations. Alternative 2 includes development of the 27.31-acre site with uses consistent with the existing General Plan and zoning designations. Based on the existing land uses and zoning, Alternative 2 would include construction and operation of an approximately 165,000-square-foot vehicle dealership (automobile or other vehicle such as motorcycles or recreational vehicles) with a service center on the eastern 12.01 acres of the site and construction and operation of approximately 120 single-family residential units on the western 15.1 acres of the site. Alternative 2 would include the demolition of the existing Mobile Home Park on the site.

1.6.4 Alternative 3 – Reduced Density and Sensitive Transition Alternative

Alternative 3 includes construction and operation of a development similar to the Project and within the same footprint as the Project but the development would involve a lower density residential component. The

commercial and open space components would be largely unchanged from the Project aside from potential minor spatial reconfiguration and would encompass approximately the same square footages as the Project. The pedestrian bridge over the Los Angeles County Flood Control channel to the north of the Project site would be unchanged from the Project. As with the Project, Alternative 3 would include adoption of a specific plan which is consistent with the development proposed. Alternative 3 would provide a more gradual transition between the higher density apartment component of the development and the existing single-family residential neighborhood to the west of the Project site across Grace Avenue by placing housing that is more consistent with the scale and spacing of the single-family residential neighborhood in the area immediately adjacent to it.

1.7 Areas of Known Controversy/Issues to be Resolved

Section 15123(b)(2) of the CEQA Guidelines requires the executive summary of an EIR to disclose areas of controversy known to the lead agency that have been raised by the agencies and the public.

A Notice of Preparation for this EIR and an Initial Study were released on January 13, 2021, beginning the 30-day public scoping period for the EIR (Appendix A-1). During the public scoping period, input is obtained from public agencies and the general public regarding the environmental issues and concerns that may potentially result from the proposed Project. Comments on the Notice of Preparation were received from five agencies, eight letters/emails from individuals or groups, which are provided in Appendix A-2 of this Draft EIR.

The City hosted one online Scoping Meeting that was held on Thursday, January 28, 2021, at 6:00 p.m. At the conclusion of the presentation, attendees of the online meeting were able to provide comments and questions about the proposed Project to the City and the CEQA Consultant during the questions and answers portion of the meeting. The City received three comments during the Scoping Meeting.

The primary areas of controversy identified by the public and agencies included the following potential issues (the Draft EIR section that addresses the issue raised is provided in parentheses):

- Recommendation for contacting the appropriate regional California Historical Research Information System Center; contacting the Native American Heritage Commission for Sacred Lands File search and Native American Tribal Consultation List; and for compliance with Assembly Bill 52 and other applicable laws (see Section 4.3, Cultural Resources and Tribal Cultural Resources)
- Recommendation to include a Transportation Impact Study, using Vehicle Miles Traveled to evaluate transportation impacts, and identification of potential traffic impacts (see Section 4.13, Transportation)
- Recommendation to use South Coast Air Quality Management District's CEQA Air Quality Handbook and CalEEMod land use emissions software when preparing air quality and greenhouse gas analyses (see Section 4.2, Air Quality, Section 4.6, Greenhouse Gas Emissions)
- Concern regarding the displacement of existing residents of the Mobile Home Park resultant from the Mobile Home Park closure (Section 4.11, Population and Housing)
- Recommendation to minimize traffic and potential parking issues on Grace Avenue (see Section 4.13, Transportation)

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Aesthetics			
Would the project have a substantial adverse effect on a scenic vista?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact	None required.	No Impact
In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project have a cumulative effect on aesthetic resources?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Air Quality			
Would the project conflict with or obstruct implementation of the applicable air quality plan?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
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?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project expose sensitive receptors to substantial pollutant concentrations?	Less-than-Significant Impact	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project have a cumulative effect on air quality resources?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Cultural Resources and Tribal Cultural Resources			
Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project have a cumulative effect on cultural resources?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall	Potentially Significant	**MM-TCR-1: Retain a Native American Monitor/Consultant.** The Project Applicant shall be required to retain and compensate for the services of a Tribal monitor/consultant who is both ancestrally affiliated with the Project area and approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the Native American Heritage Commission's (NAHC) Tribal Contact list for	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
consider the significance of the resource to a California Native American tribe?		the area of the Project location. This list is provided by the NAHC. A Native American monitor shall be retained by the Lead Agency or owner of the Project to be on site to monitor all project-related, ground-disturbing construction activities (i.e., boring, grading, excavation, potholing, trenching, etc.). A monitor associated with one of the NAHC recognized Tribal governments which have commented on the Project shall provide the Native American monitor. The monitor/consultant will only be on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the p Project area. The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day's activities, including construction ground disturbing activities, locations, soil, and any cultural materials identified, if any. The on-site monitoring shall end when the Project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal Cultural Resources.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Unanticipated Discovery of Tribal Cultural and Archaeological Resources. Upon discovery of any tribal cultural or archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. All tribal cultural and archaeological resources unearthed by Project construction activities shall be evaluated by the qualified archaeologist and tribal monitor/consultant. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request preservation in place or recovery for educational purposes. Work may continue on other parts of the Project while evaluation and, if necessary, additional protective mitigation takes place (CEQA Guidelines Section 15064.5[f]). If a resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource, time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources. **Public Resources Code Section 21083.2(b)** for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. All Tribal Cultural Resources shall be returned to the Tribe. Any historical archaeological material that is not Native	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		American in origin shall be curated at a public, non-profit institution with a research interest in the materials, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to the Tribe of a local school or historical society in the area for educational purposes. **Unanticipated Discovery of Human Remains and Associated Funerary Objects.** Native American human remains are defined in PRC Section 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC Section 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, they shall contact, by telephone within 24 hours, the NAHC and PRC Section 5097.98 shall be followed. **Resource Assessment and Continuation of Work Protocol.** Upon discovery of human remains, the tribal and/or archaeological monitor/consultant will immediately divert work at minimum of 150 feet and place an exclusion zone around the discovery location. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		the remains are human and subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD). **Kizh-Gabrieleno Procedures for Burials and Funerary Remains.** If the Gabrieleno Band of Mission Indians-Kizh Nation is designated MLD, the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects. **Treatment Measures.** Prior to the continuation of ground disturbing activities, the landowner shall arrange a designated site location within the footprint of the Project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard shall be posted outside of working hours. The Tribe will make every effort to recommend diverting the Project and keeping the remains in situ and protected. If the Project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically, and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure complete recovery of all material. If the discovered of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does not authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains. Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects, and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the Project site but at a location agreed upon between the Tribe and the landowner at the site	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered. **Professional Standards.** Archaeological and Native American monitoring and excavation during construction projects will be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects shall be taken. Principal personnel must meet the Secretary of Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist shall ensure that all other personnel are appropriately trained and qualified.	
Would the project have a cumulative effect on tribal cultural resources?	Potentially Significant	MM-TCR-1	Less-than-Significant Impact
Energy			
Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project have a cumulative effect on energy resources?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Geology and Soils			
Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			
a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-	No Impact	None required.	No Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?			
b. Strong seismic ground shaking?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
c. Seismic related ground failure including liquefaction?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
d. Landslides?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project result in substantial soil erosion or the loss of topsoil?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
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?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact	None required.	No Impact
Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant	**MM-PALEO-1: Paleontological Resources Impact Mitigation Program and Paleontological Monitoring.** Prior to commencement of any grading activity on site, the applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010)	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the Proposed Project. The PRIMP shall be consistent with the SVP (2010) guidelines and outline requirements for preconstruction meeting attendance and worker environmental awareness training, where paleontological monitoring is required within the Project site based on construction plans and geotechnical reports, procedures for adequate paleontological monitoring and discoveries treatment, and paleontological methods (including sediment sampling for microinvertebrate and microvertebrate fossils), reporting, and collections management. The qualified paleontologist shall attend the preconstruction meeting and a qualified paleontological monitor shall be on site during all rough grading and other significant ground-disturbing activities (including augering) in previously undisturbed Pleistocene deposits as stated in the PRIMP. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will allow grading to recommence in the area of the find.	
Would the project have a cumulative effect on geology and soils resources?	Potentially Significant	**MM-PALEO-1**	Less-than-Significant Impact
Greenhouse Gas Emissions			
Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less-than-Significant Impact	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project have a cumulative effect on greenhouse gas emissions?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Hazards and Hazardous Materials			
Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
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?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact	None required.	No Impact
Would the project be located on a site that is included on a list of hazardous materials 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?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact	None required.	No Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	No Impact	None required.	No Impact
Would the project have a cumulative effect on hazards or hazardous materials?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Hydrology and Water Quality			
Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
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?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
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:			
a. result in substantial erosion or siltation on or off site;	Less-than-Significant Impact	None required.	Less-than-Significant Impact
b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;	Less-than-Significant Impact	None required.	Less-than-Significant Impact
c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	Less-than-Significant Impact	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
d. impede or redirect flood flows?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project have a cumulative effect on hydrology or water quality resources?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Land Use and Planning			
Would the project physically divide an established community?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
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?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project have a cumulative effect on land use resources?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Noise			
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?	Potentially Significant Impact	**MM-NOI-1** To reduce noise levels during construction activities, the Project Applicant must demonstrate, to the satisfaction of the City of Carson Community Development Director, that the Project complies with the following: • Construction contracts must specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state-required noise attenuation devices.	Significant and Unavoidable Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		• A sign, legible at a distance of 50 feet, shall be posted at the Project site providing a contact name and a telephone number where residents can inquire about the construction process and register complaints. This sign shall indicate the dates and duration of construction activities. In conjunction with this required posting, a noise disturbance coordinator shall be identified to address construction noise concerns received. The coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the disturbance coordinator shall notify the City within 24 hours of the complaint and determine the cause of the noise complaint (starting too early, malfunctioning muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the City. All signs posted at the construction site shall include the contact name and the telephone number for the noise disturbance coordinator. • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers. • Per Section 5502 (c) of the Municipal Code, construction shall be limited to the hours between 7:00 a.m. and 8:00 p.m. daily (except Sundays and legal holidays). All construction activities shall be prohibited at night (between 8:00 p.m. and 7:00 a.m.) and on Sundays and legal holidays. **MM-NOI-2** In order to reduce construction noise, a temporary noise barrier or enclosure shall be used along the southern and southwestern portion property	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		lines to break the line of sight between the construction equipment and the adjacent residences; Assessor's Parcel Number (APN) 7337-002-047, 7337-002-004, 7337-002-008, 7337- 002-010, 7337-002-012, 7337-002-040. The temporary noise barrier shall have a sound transmission class (STC) of at least 10 or greater in accordance with American Society for Testing and Materials Test Method E90, or at least 2 pounds per square foot to ensure adequate transmission loss characteristics. In order to achieve this, the barrier may consist of 3-inch steel tubular framing, welded joints, a layer of 18-ounce tarp, a 2-inch-thick fiberglass blanket, a 0.5-inch-thick weatherwood asphalt sheathing, and 7/16-inch sturdy board siding with a heavy duct seal around the perimeter. The length, height, and location of noise control barrier walls shall be adequate to assure proper acoustical performance. In addition, to avoid objectionable noise reflections, the source side of the noise barrier shall be lined with an acoustic absorption material meeting a noise reduction coefficient rating of 0.70 or greater in accordance with American Society for Testing and Materials Test Method C423. All noise control barrier walls shall be designed to preclude structural failure due to such factors as winds, shear, shallow soil failure, earthquakes, and erosion. **MM-NOI-3** To reduce construction truck trip noise impacts on sensitive receptors during construction activities, the Project Applicant must demonstrate, to the satisfaction of the City of Carson Community Development Director, that the Project complies with the following:	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		• The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 7:00 a.m. to 8:00 p.m. on weekdays and Saturdays with no activity allowed on Sundays or holidays). A haul route exhibit shall be submitted to the City of Carson Community Development Director that designates delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise. Specifically, the haul route exhibit shall depict site access for construction haul truck trips along Avalon Boulevard.	
Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Potentially Significant Impact	**MM-NOI-4** The following measures shall be incorporated on all grading and building plans and specifications subject to approval of the City's Building and Safety Division prior to issuance of a demolition or grading permit (whichever occurs first): • The Project Applicant shall ensure construction equipment will not approach the construction buffer zone adjacent to the residential structures along the Project's southern and southwestern boundary. The buffer zone shall be tiered based on distances established in Table 4.10-12, Representative Vibration Source Levels for Construction Equipment. As shown in Table 4.10-12, vibratory drivers shall not operate within 60 feet of residential structures; vibratory rollers shall not operate within 26 feet of residential structures; and large bulldozers, caisson drilling activities, and loaded trucks shall not operate within 15 feet of residential structures. The buffer zone shall be in enforced around the existing residential structures between	Less-than-Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		the hours of 7:00 a.m. and 8:00 p.m. pursuant to Municipal Code Section 5502 (c). • The Project Applicant shall utilize a construction vibration monitoring system with the potential to measure low levels of vibration (i.e., 0.2 inch-per-second PPV and 0.3 inch-per-second PPV) to ensure human annoyance and structural damage does not occur. If the human annoyance criterion (0.2 inch-per-second PPV) and the structural damage criterion (0.3 inch-per-second PPV) are exceeded, construction must cease and alternate strategies shall be employed to ensure the human annoyance and structural damage vibration criteria are not exceeded. • The Project Applicant shall conduct sensitivity training to inform construction personnel about the existing sensitive receptors surrounding the Project and about methods to reduce noise and vibration.	
For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact.	None required.	No Impact
Would the project have a cumulative effect on noise resources?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Population and Housing			
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,	Less-than-Significant Impact	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
through extension of roads or other infrastructure)?			
Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project have a cumulative effect on housing and/or population resources?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Public Services and Recreation			
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:			
Fire protection?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Police protection?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Schools?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Parks?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Other public facilities?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project have a cumulative effect on public services resources?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
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?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Does the project include recreational facilities or require the construction or expansion of	Less-than-Significant Impact	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
recreational facilities, which might have an adverse physical effect on the environment?			
Would the project have a cumulative effect on recreation resources?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Transportation			
Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project result in inadequate emergency access?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project have a cumulative effect on transportation resources?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Utilities and Service Systems			
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?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Less-than-Significant Impact	None required.	Less-than-Significant Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
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?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
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?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less-than-Significant Impact	None required.	Less-than-Significant Impact
Would the project have a cumulative effect on utilities and/or service systems resources?	Less-than-Significant Impact	None required.	Less-than-Significant Impact

2 Introduction

The purpose of this section is to introduce the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project), the applicable environmental review procedures, and the organization of the Draft Environmental Impact Report (EIR).

2.1 CEQA Overview and Purpose of an EIR

This Draft EIR has been prepared by the City of Carson (City) to evaluate potential environmental effects that would result from implementation of the Project. This Draft EIR has been prepared in conformance with the California Environmental Quality Act (CEQA) statutes (California Public Resources Code, Section 2100 et. seq.) and its implementing guidelines (14 CCR 15000 et. seq.). The Project constitutes a "project" as defined in the CEQA Guidelines Section 15378. Pursuant to Section 15367 of the CEQA Guidelines, the City is the Lead Agency for the Project.

This Draft EIR provides project-level analyses of the potential environmental impacts related to implementation of the Project. The Project includes the removal and/or demolition of existing on-site structures and buildings and the construction of a mixed-use development. The proposed Project would consist of fifty-three multi-story buildings that would support a mix of residential, commercial, and open space uses. As part of the Project, Imperial Avalon LLC (Applicant) would develop the Imperial Avalon Specific Plan (IASP) for the Project site. The uses permitted in the IASP would directly correspond to the final Project description and include residential, commercial, and open space uses.

CEQA requires the preparation of an EIR for any project that a Lead Agency determines may have a significant impact on the environment. According to Section 21002.1(a) of CEQA:

> The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided.

CEQA also establishes mechanisms whereby the public and decision makers can be informed about the nature of the project being proposed and the extent and types of impacts that the project and its alternatives would have on the environment, if they were to be implemented.

The basic purposes of CEQA are as follows (14 CCR 15002):

1. Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities;
2. Identify the ways that impacts to the environment can be avoided or significantly reduced;
3. Prevent significant, avoidable impacts to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
4. Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

This Draft EIR was prepared in accordance with Section 15151 of the State CEQA Guidelines, which defines the standards for EIR adequacy as follows:

> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

A detailed description of the Project is provided in Section 3, Project Description, of this Draft EIR, which includes a listing of the discretionary actions that must be considered by the City and other responsible agencies. This Draft EIR is intended to serve as a Project EIR under CEQA. Section 15161 of the CEQA Guidelines states that a Project EIR should focus primarily on changes in the environment that would result from development of the project or, in the case of a land use regulation such as a Specific Plan, the full buildout of allowable development and implementation of associated actions identified in the Specific Plan. A Project EIR must examine all phases of a Project, including planning, construction, and operation. This Project EIR is intended to provide the environmental information necessary for the City to make a final decision on the requested discretionary actions to be considered as part of the proposed Project and to cover the future development on the Project site that is consistent with the IASP. This Draft EIR is also intended to support discretionary reviews and decisions by other agencies.

2.2 Purpose of a Specific Plan

California Government Code section 65450 states that after a General Plan has been adopted, a specific plan may be prepared for the systematic implementation of the General Plan for all or part of the area covered by the General Plan. The IASP was prepared in accordance with the requirements of the California Government Code (Sections 65450–65457), which allows jurisdictions to adopt specific plans to implement their General Plans. Adoption of a specific plan is a legislative act that is conducted in the same manner as a General Plan. The purpose of a specific plan is to provide for the orderly development of a property through compliance with site-specific development standards that are consistent with the intent and policies of the General Plan.

Upon adoption of a specific plan, it becomes the zoning for the site(s) or parcel(s) within its boundaries. The proposed IASP would set regulations that govern the allowable land uses, development density, and development standards for future development projects, in place of the City's zoning regulations as set forth within IASP boundaries set forth therein. However, regulations and standards in the City's zoning regulations that are not covered by the IASP would continue to be applicable to future development.

2.3 Organization of this EIR

This Draft EIR is organized into seven chapters. A list of the Draft EIR sections and a brief description of their contents is provided to assist the reader in locating information.

Acronyms and Abbreviations: This includes a listing of acronyms and abbreviations used throughout the Draft EIR.

Section 1, Executive Summary: This section provides a summary of the Project Description, environmental impacts, mitigation measures, determinations of significance and Alternatives to the Project.

Section 2, Introduction: This section briefly discusses the purpose of the Draft EIR, provides an overview of the purposes of a Specific Plan, and provides a summary of the relevant CEQA Guidelines that govern the preparation of this EIR. This section summarizes the scoping period and the comments received by the City on the Notice of Preparation (NOP) during the scoping process.

Section 3, Project Description: In accordance with Section 15124 of the CEQA Guidelines, this section outlines the City's underlying purpose and objectives for the Project, includes a summary of the components of the IASP, and includes a listing of the discretionary actions that must be considered by the City and other responsible agencies.

Section 4, Impact Analysis: This section contains subsections 4.1 Aesthetics through 4.14, Utilities and Service Systems. Each subsection includes the following: existing conditions of the Project site and vicinity, identifies associated regulatory requirements, thresholds of significance, impact analysis, cumulative impacts, mitigation measures (if any), level of significance after mitigation, and references. Section 4 includes the following subsections:

- Section 4.1: Aesthetics
- Section 4.2: Air Quality
- Section 4.3: Cultural Resources and Tribal Cultural Resources
- Section 4.4: Energy
- Section 4.5: Geology and Soils
- Section 4.6: Greenhouse Gas Emissions
- Section 4.7: Hazards and Hazardous Materials
- Section 4.8: Hydrology and Water Quality
- Section 4.9: Land Use and Planning
- Section 4.10: Noise
- Section 4.11: Population and Housing
- Section 4.12: Public Services and Recreation
- Section 4.13: Transportation
- Section 4.14: Utilities and Service Systems

Section 5, Other CEQA Considerations: This section contains a summary discussion of any significant unavoidable impacts, potential growth-inducing impacts, energy impacts, and any significant irreversible environmental changes that would be caused by the Project. Additionally, this section includes an overview of Agriculture and Forestry Resources, Biological Resources, Mineral Resources, and Wildfire, which were determined by the City to not have the potential to result in significant effects on the environment.

Section 6, Alternatives: Pursuant to Section 15126.6 of the CEQA Guidelines, this section includes an analysis of a reasonable range of feasible alternatives to the Project. Alternatives are analyzed that would feasibly attain most of the basic objectives of the Project but would avoid or reduce any of the significant effects of the Project. The comparative merits of each alternative are evaluated when compared to the Project, and an environmentally superior alternative is identified in compliance with Section 15126.6(e)(2).

Section 7, List of Preparers: This section lists the persons that directly contributed to preparation of the Draft EIR.

2.4 Lead Agency and Responsible Agencies

2.4.1 City of Carson

Section 15051 of the CEQA Guidelines identifies the Lead Agency as the public entity with the greatest responsibility for carrying out or approving the project as a whole. The Applicant applied for the IASP along with other applications to allow for the proposed mixed-use development. As such, the City is serving as the Lead Agency under CEQA and is responsible for complying with CEQA, as it relates to the environmental review clearance for the Project.

The City, as the Lead Agency, determined that an EIR is required for the Project and has authorized the preparation of this Draft EIR. The City has independently reviewed and considered the findings of this EIR in its decision to approve, revise, or deny the proposed Project, as well as actions that it may need to achieve consistency between the IASP and the City's General Plan, including a change in the Land Use Plan designation of the Project site to Urban Residential, and a change in the Zoning designation of the Project site to IASP, among other discretionary actions described in Chapter 3, Project Description.

While this EIR was prepared with consultant support, the analysis and findings in this document have been independently reviewed by the City and reflect the City's conclusions, as required by Section 15084 of the CEQA Guidelines. Pursuant to CEQA Guidelines Section 15040 through 15043, and upon completion of the CEQA review process, the City will have the legal authority to do any of the following:

- Approve the Project.
- Require feasible changes in any or all activities involved in the Project to substantially lessen or avoid significant effects on the environment.
- Disapprove the Project, if necessary, to avoid one or more significant effects on the environment that would occur if the Project was approved as proposed.
- Approve the Project, even though implementation of the Project would cause a significant effect on the environment if the City makes a fully informed and publicly disclosed decision that (1) there is no feasible way to lessen the effect or avoid the significant effect, and (2) expected benefits from the Project will outweigh significant environmental impacts of the Project.

This Draft EIR fulfills the CEQA environmental review requirements for the following and all other governmental discretionary and ministerial actions related to the Project:

- Certification of CEQA documentation
- Project approval
- Specific Plan
- General Plan Amendment and Zone Text/Map Amendment
- Development Agreement
- Design Overlay Review
- Vesting Tentative Tract Map
- Site Plan and Design Review

This document is an informational document intended for use by City decision makers, trustee and responsible agencies, and members of the general public in evaluating the physical environmental impacts of the Project. This Draft EIR is the primary reference document for the formulation and implementation of a mitigation monitoring program for the Project, in compliance with Public Resource Code, Section 21081.6. Environmental impacts cannot always be mitigated to a level considered less than significant. In accordance with Section 15093(b) of the CEQA Guidelines, if a Lead Agency approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts), the agency shall state in writing the specific reasons for approving the Project, based on the final CEQA documents and any other information in the public record. This is defined in Section 15093 of the CEQA Guidelines as "a Statement of Overriding Considerations."

2.4.2 Responsible Agencies

State law requires that all EIRs be reviewed by trustee and responsible agencies. A "Trustee Agency" is defined in Section 15386 of the CEQA Guidelines as "a State agency having jurisdiction by law over natural resources affected by a project, which are held in trust for the people of the State of California." Per Section 15381 of the CEQA Guidelines, "the term 'Responsible Agency' includes all public agencies other than the Lead Agency which have discretionary approval power."

In accordance with Section 21081 of CEQA and Section 15091 of the CEQA Guidelines, public agencies are required to make written findings for each environmental impact identified in the EIR. If the Lead Agency and responsible agencies decide that the benefits of the Project outweigh any identified unmitigated significant environmental effects, they will be required to adopt a Statement of Overriding Considerations supporting their actions. Future discretionary actions that would be needed for the City's approval of the Project, as well as the discretionary actions of responsible and trustee agencies, are described below. The following are responsible agencies and their respective discretionary authority over the proposed Project:

- State Water Resources Control Board
- Los Angeles County Flood Control
- South Coast Air Quality Management District
- California Department of Transportation
- California Department of Fish and Wildlife

2.5 Public Review Process

2.5.1 Notice of Preparation

The City has complied with the CEQA Guidelines by providing opportunities for early responsible and trustee agency participation in the environmental review process, as well as opportunity for early public consultation with bordering municipalities and interested organizations and individuals. Specifically, in accordance with Section 15082(a) of the CEQA Guidelines, the City circulated a NOP for a 30-day public review. The NOP was sent to the State Clearinghouse, public agencies, special districts, responsible and trustee agencies, and other interested parties for a public review period that began on January 13, 2021 and ended on February 12, 2021 (CEQA Public Review and Scoping Period). The purpose of the NOP is to formally convey that the City, as the Lead Agency, solicited input regarding the scope and proposed content of the Draft EIR.

Copies of the NOP were made available for electronic download on the City's website at https://ci.carson.ca.us /CommunityDevelopment/ImperialAvalon.aspx.

The NOP included a description of the Project; identification of potential environmental effects associated with Project approval and implementation; and an invitation to agencies and the public to review and comment on the NOP, which are provided in Appendix A-1 of this Draft EIR. Comments on the NOP were received from five agencies, eight letters/emails from individuals or groups, and three comments raised during the Scoping Meeting, which are provided in Appendix A-2 of this Draft EIR. The Scoping Period comment letters, which contain environmental concerns, are listed in Table 2-1, Notice of Preparation and Scoping Comment Letters Summary, along with a summary of the environmental issues raised and the Draft EIR section where the environmental topics are addressed. Only comment letters with environmental concerns are listed in Table 2-1.

2.5.2 Scoping Meeting

Pursuant to Section 21083.9 of the CEQA Statutes and Section 15082(c) of the State CEQA Guidelines, the Lead Agency is required to conduct at least one scoping meeting for all projects of state-wide, regional, or area-wide significance as outlined in Section 15206 of the CEQA Guidelines. The scoping meeting is for jurisdictional agencies and interested persons or groups to provide comments regarding, but not limited to, the range of actions, alternatives, mitigation measures, and environmental effects to be analyzed. Instead of conducting an in-person meeting, the Governor's Executive Order N-25-20 allows local governments to hold meetings via teleconferencing while still meeting state transparency requirements. Therefore, the Project's Scoping Meeting was held online through a virtual platform specifically via a Zoom webinar. The City hosted one Scoping Meeting that was held on Thursday, January 28, 2021 at 6:00 p.m. that was made available through the City's website.

At the conclusion of the presentation, attendees of the webinar were able to provide comments and questions about the Project to the City, the Applicant, and the CEQA Consultant during the formal questions and answers portion of the meeting. The City received three comments/questions with environmental concerns during the Scoping Meeting. The comments are summarized in Table 2-1.

Table 2-1. Notice of Preparation and Scoping Comment Letters Summary

Sender of Comments	Date Received	General Summary of Comments	Addressed in Section(s)
State Agency			
California Department of Transportation	February 23, 2021	The Draft EIR should include a Transportation Impact Study, using Vehicle Miles Traveled to evaluate transportation impacts, and identification of potential traffic impacts.	Section 4.13, Transportation
Native American Heritage Commission (NAHC)	January 13, 2021	Recommendations for cultural assessment by contacting the appropriate regional California Historical Research Information System Center; contacting NAHC for Sacred Lands File search and Native American Tribal Consultation List; and consulting legal counsel about compliance with Assembly Bill 52 and other applicable laws.	Section 4.3, Cultural Resources and Tribal Cultural Resources

Table 2-1. Notice of Preparation and Scoping Comment Letters Summary

Sender of Comments	Date Received	General Summary of Comments	Addressed in Section(s)
Regional/Local Agency			
County of Los Angeles Fire Department	February 9, 2021	The Land Development Unit outlined requirements for the proposed Project to comply with and the Forestry Division included areas of environmental concern to be addressed in the Draft EIR.	Section 4.12, Public Services and Recreation; Section 4.13, Transportation; Section 4.14, Utility and Service Systems; Chapter 5, Other CEQA Considerations
Los Angeles County Sanitation District	February 9, 2021	Provided recommendations and additional information regarding the sewage service in the Project area.	Section 4.14, Utility and Service Systems.
South Coast Air Quality Management District	February 9, 2021	Recommendations on the analysis of potential air quality impacts to be included in the Draft EIR.	Section 4.2, Air Quality; Section 4.4, Energy; Section 4.6, Greenhouse Gas Emissions
Organizations/Individuals			
Supporters Alliance for Environmental Responsibility (SAFER)	January 14, 2021	Request to have notice of actions or hearings related to the proposed Project.	Not Applicable
CREED LA	January 29, 2021	Request to have notice of actions or hearings related to the proposed Project.	Not Applicable
Alva Riley	January 15, 2021	Concerns over displacement of existing residents.	Section 4.11, Population and Housing
Jett Icasiano	February 4, 2021	Concerns with the proposed gates on Grace Avenue.	Section 4.13, Transportation
Lezzie Icasiano	February 4, 2021	Concerns with the proposed gates on Grace Avenue, increased traffic, and public safety.	Section 4.12, Public Services and Recreation; Section 4.13, Transportation
Rodrigo Aquino	February 5, 2021	Concerns with the proposed gates on Grace Avenue and reduced parking.	Section 4.13, Transportation
Arturo and Rosemarie Cordero	February 8, 2021	Concerns with the proposed gates on Grace Avenue, increased traffic, and noise.	Section 4.10, Noise; Section 4.13, Transportation
Received During the Scoping Meeting			
Sean Silva, CREED LA	January 28, 2021	Interested in potential impacts related to construction, including air quality, greenhouse gases, noise, soil contamination, and hazardous materials.	Section 4.2, Air Quality; Section 4.6, Greenhouse Gas Emissions; Section 4.7, Hazards and Hazardous Materials; Section 4.10, Noise
Ralph Velador, Southern CA District Council of Laborers	January 28, 2021	Expressed excitement of the Project and indicated that there are many highly skilled tradesmen who are able and ready to provide construction services for the Project.	Not Applicable

Table 2-1. Notice of Preparation and Scoping Comment Letters Summary

Sender of Comments	Date Received	General Summary of Comments	Addressed in Section(s)
Alva Riley	January 28, 2021	Concerns over displacement of existing residents.	Section 4.11, Population and Housing
Comments Received After the Scoping Period			
Southwest Regional Council of Carpenters	June 21, 2021	Request for local hire provisions to reduce potential impacts relating to traffic and expresses concerns for health hazards relating to COVID-19.	Section 4.13, Transportation

2.5.3 Public Review of the Draft EIR

Upon completion of this Draft EIR, the City prepared and filed a Notice of Completion with the Governor's Office of Planning and Research, State Clearinghouse to start the public review period (Public Resources Code Section 21161). Concurrent with the Notice of Completion, the City distributed a Notice of Availability in accordance with CEQA Guidelines Section 15087. The Notice of Availability was mailed to the agencies, organizations, and individuals who previously requested in writing to receive a copy. This Draft EIR was distributed to responsible and trustee agencies, other affected agencies, surrounding cities and municipalities, and all interested parties requesting a copy of this document in accordance with Public Resources Code Section 21092(b)(3). The Notice of Availability was also published within the Daily Breeze, a newspaper of general circulation in the Project area. During the public review period, this Draft EIR, including the appendices, is available for review at the following locations:

In Person:

City of Carson
Community Development Department, Planning Division
701 East Carson Street
Carson, California 90745
Phone: 310.952.1761

Online:

https://ci.carson.ca.us/CommunityDevelopment/ImperialAvalon.aspx

Agencies, organizations, individuals, and all other interested parties not previously contacted, or who did not respond to the NOP, currently have the opportunity to comment on this Draft EIR during the public review period. Written or email comments on this Draft EIR should be addressed to:

Gena Guisar, AICP, Planner
City of Carson
Community Development Department, Planning Division
701 East Carson Street
Carson, California 90745
Email: gguisar@carsonca.gov
Phone: 310.952.1761
Fax: 310.835.5749

Upon completion of the public review period, written responses to all substantive environmental comments will be prepared and made available prior to the public hearing on the Project before the City's Planning Commission, followed by the City Council, at which the Final EIR will be considered for certification. The comments received and the responses to those comments will be included as part of the record for consideration for the Project.

2.6 Effects Found Not to Be Significant

As discussed in the NOP (Appendix A-1), the Project is not anticipated to result in significant impacts to the following topical areas:

- Agriculture and Forestry Resources;
- Biological Resources;
- Mineral Resources; and
- Wildfire

Nevertheless, these topics are briefly discussed in Section 5, Other CEQA Considerations, of this Draft EIR.

2.7 Environmental Issues Determined to Be Potentially Significant

Pursuant to CEQA and CEQA Guidelines Section 15064, the discussion of potentially significant environmental impacts is focused within this Draft EIR on those impacts that the Lead Agency has determined could be potentially significant. A determination of those environmental impacts that would be potentially significant was made for the Project based on a review of comments received as part of the NOP scoping process and additional research and analysis of relevant information during preparation of this Draft EIR.

The scope of this Draft EIR includes environmental issues identified by the City during the preparation of the NOP, as well as issues raised by public agencies and members of the public in response to the NOP. The following environmental issue areas were determined to be potentially significant and are addressed at length in this Draft EIR:

- Aesthetics
- Air Quality
- Cultural Resources and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation
- Utilities and Service Systems

2.8 Incorporated by Reference

In accordance with Section 15150 of the CEQA Guidelines, an EIR may incorporate by reference all or portions of another publicly available document. Where all or a part of another document is incorporated by reference, the incorporated language is considered to be included in the EIR. The following documents are incorporated by reference into this Draft EIR and are available at the City of Carson Planning Division:

City of Carson General Plan: The City of Carson General Plan (General Plan) is intended to provide direction for future development of the City. It represents a formal expression of community goals and desires, provides guidelines for decision making about the City's development, and fulfills the requirements of California Government Code Section 65302 requiring local preparation and adoption of General Plans. The General Plan should be viewed as a dynamic guideline to be refined as the physical environment of the City's changes. The General Plan includes the following mandated and optional elements: Land Use Element, Economic Element, Transportation Element, Housing Element, Safety Element, Noise Element, Open Space Element, Parks and Recreation Element, and Air Quality Element.

An update to the General Plan was adopted in 2004, though elements of the General Plan have been subsequently updated, such as the Land Use Element and Housing Element. In addition, the City of Carson is currently in the process of updating its General Plan at the time of drafting this EIR. It is currently anticipated that the City will have comprehensively updated its General Plan and prepared an accompanying EIR by late-2022. Electronic files of the General Plan are available online for review and download at:

https://ci.carson.ca.us/communitydevelopment/generalplan.aspx

Carson Municipal Code: The City of Carson implements its General Plan through specific plans and zoning. The Zoning Ordinance (Article 9 of the Carson Municipal Code) establishes the regulations for each zoning classification that limit the types of development allowed, and establishes design regulations addressing such topics as permitted densities, maximum building heights, setbacks, etc. Electronic files of the Carson Municipal Code are available online for review and download at:

https://www.codepublishing.com/CA/Carson/

2.9 Mitigation Monitoring

CEQA Guidelines Section 15097 requires that the mitigation measures and revisions to the Project identified in the EIR are implemented. Therefore, CEQA requires that the Lead Agency must adopt a program for monitoring or reporting on the required revisions and the measures it has imposed to mitigate or avoid significant environmental effects. The Mitigation Monitoring and Reporting Program for the IASP will be completed as part of the Final EIR, prior to consideration of the Project by the City of Carson Planning Commission and City Council.

3 Project Description

This section provides a description of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project). The purpose of this section is to describe the proposed Project in a manner that will be meaningful for review by the public, reviewing agencies, and decision makers in accordance with the California Environmental Quality Act (CEQA), Public Resources Code sections 21000 et seq., and the CEQA Guidelines (14 CCR 15000 et seq.). Per the requirements of Section 15124 of the CEQA Guidelines, a complete project description must contain the following information:

> (a) the precise location and boundaries of the proposed project, shown on a detailed map, along with a regional map of the project's location (see Section 3.2);
>
> (b) a statement of the objectives sought by the proposed project, which should include the underlying purpose of the project (see Section 3.9);
>
> (c) a general description of the project's technical, economic, and environmental characteristics, considering the principal engineering documentation and supporting public service facilities (see Section 3.4 and Section 3.6); and
>
> (d) a statement briefly describing the intended uses of the Environmental Impact Report (EIR), including a list of the agencies that are expected to use the EIR in their decision making, a list of permits or other approvals required to implement the project, and a list of related environmental review and consultation requirements imposed by federal, state, or local laws, regulations, or policies (see Section 3.10 and Section 3.11).

In accordance with Section 15124, the description of the Project "should not supply extensive detail beyond that needed for evaluation and review of environmental impacts." This section of the Draft EIR (Environmental Impact Report) includes the required information, as listed previously.

3.1 Project Overview

The Project involves (1) the adoption of the Imperial Avalon Specific Plan (IASP), which would establish a new regulating plan within the IASP area (Project site) and allow for the development of residential, commercial, recreational/open space uses, and (2) implementation of the IASP through the development of a specific development proposal, which involves relocation or disposal of existing mobile home coaches, demolition of other existing on-site structures, and the development of a mixed-use neighborhood containing multifamily residences, townhomes, neighborhood-serving commercial uses, open space and recreation opportunities, and associated parking areas. Collectively, the IASP and implementation of the specific development proposal constitute the Project analyzed in this EIR and are referred to as the "Project." Thus, The Project, as evaluated in this Draft EIR, would involve (1) a General Plan Amendment to change the Project site's General Plan Land Use Designation from Regional Commercial and Low Density Residential to Urban Residential, (2) a zone change to change the Project site's zoning from Commercial, Automotive and RM-8-D zone to Specific Plan, (3) adoption of the IASP, (4) site plan and design review and (5) a tentative tract map to facilitate the construction of the proposed development, and (6) approval of a development agreement.

3.2 Project Location

Figure 3-1, Project Location, includes a graphic depiction of the location of the Project in a regional and local context. A description of the regional location and Project site is detailed in the following text, along with a description of the environment that immediately surrounds the Project site.

Regional Location

As shown in Figure 3-1, the Project site is in the City of Carson (City), which is located in the South Bay/Harbor area of the County of Los Angeles (County). The City is surrounded by the City of Los Angeles to the northwest, south, and southeast; the City of Compton to the northeast; and the City of Long Beach to the east. The City is also close to the Ports of Los Angeles and Long Beach, approximately 2 to 3 miles to the south. There are four freeways that provide direct access to Carson: Interstate (I) 405 (San Diego Freeway), which bisects the City in an east/west direction; I-710 (Long Beach Freeway), which forms a portion of the eastern limits of Carson; State Route 91 (Redondo Beach/Artesia Freeway) in the northern portion of the City; and I-110 (Harbor Freeway), which forms much of the western border of the City (City of Carson 2002).

Project Site

The approximately 27.31-acre Project site is in the northeast corner of the City, immediately southwest of I-405. The Project site is bound by the concrete-lined Torrance Lateral Drainage Canal to the north, South Avalon Boulevard to the east, East 213 Street to the south, and Grace Avenue to the west. Specifically, the Project site is located at 21207 South Avalon Boulevard, Carson, California 90745. The Project site is comprised of five Assessor's Parcel Numbers (APNs): 7337-001-025, -026, -027, -028, and -029.

3.3 Environmental Setting

City of Carson

The City is approximately 19 square miles in the South Bay region of the County. Generally, the City is an urban community with a broad mix of land uses, including housing, commercial, office, industrial park, open space, and public-serving uses. The City is primarily built out and relatively flat, with most elevations ranging from 20 to 40 feet above sea-level. The northwest and southeast portions of the City are generally focused on industrial and logistics uses. Residential uses are located on the southwest and northeast parts of the City. Commercial uses are generally concentrated along I-405 Freeway and Cason Street.



SOURCE: Esri and Digital Globe, Open Street Map

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FIGURE 3-1

Project Location

Imperial Avalon Mixed-Use Project

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SOURCE: Esri and Digital Globe, Open Street Map

FIGURE 3-2

Existing and Surrounding Land Uses

Imperial Avalon Mixed-Use Project

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Existing Land Uses

Imperial Avalon Mobile Estates

The Project site is currently developed with the Imperial Avalon Mobile Estates mobile home park (Mobile Home Park), as depicted on Figure 3-2, Existing and Surrounding Land Uses. The Mobile Home Park opened in 1975 and contains 228 spaces for mobile homes, of which 225 were occupied at the time of the Notice of Preparation of the Draft EIR, a recreational vehicle storage yard with over 20 spaces, and a common area including a clubhouse, grass field, recreation building, swimming pool, and guest parking spaces. The Mobile Home Park had 373 residents at the beginning of the closure process. The Mobile Home Park contains minimal landscaping along the boundaries of the interior roads and within common areas. Existing mobile home coaches vary from single-wide, double-wide, and triple-wide homes and are of various ages. All existing residents leasing spaces or coaches in the park are a minimum of 55 years old, with allowances for some additional family members or caretakers.

Imperial Avalon Mobile Estates Closure

In September 2019, the owner of the Mobile Home Park, Imperial Avalon, LLC (Mobile Home Park Owner; the Mobile Home Park Owner is also the Project Applicant), notified Mobile Home Park residents of its intention to close the Mobile Home Park. Closures of mobile home parks within the City are subject to Carson Municipal Code Section 9128.21, which requires the preparation of a Relocation Impact Report (RIR) which requires that park owners take reasonable measures to reduce the adverse impact of a closure on the ability of park residents to find alternative housing. After compliance with Carson Municipal Code Section 9128.21 and approval of a RIR by the Carson Planning Commission (or the City Council, if the Planning Commission's approval of a RIR is appealed), park owners have a property right under State law to close a park at their discretion, subject to issuance of a 6-month notice of termination of the residents' tenancies in their space leases. The Mobile Home Park Owner completed its application for approval of a RIR, RIR No. 05-20, in April of 2020 by filing its RIR. A Planning Commission hearing to consider the RIR was conducted on May 13, 2020. At this hearing, the Planning Commission approved RIR No. 05-20 and associated measures with special conditions. This decision was subsequently appealed to the City Council, by adoption of Resolution No. 20-113. On July 7, 2020 the City Council affirmed the Planning Commission's approval of RIR No. 05-20 and imposed additional conditions and relocation requirements. A Notice of Exemption for the RIR was filed with the Los Angeles County Clerk-Recorder on July 7, 2020 and was posted for a 30-day period from July 17, 2020 through August 17, 2020. No challenges to the City's approval of the RIR were timely filed.

Environmental Baseline

Under CEQA, the impacts of a proposed project must be evaluated by comparing expected environmental conditions after project implementation to conditions at a point in time referred to as the environmental baseline. The changes in environmental conditions between those two scenarios represent the environmental impacts of the proposed project.

The Section 15125 of the CEQA Guidelines provides the following guidance for establishing the baseline:

> An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.

The Project's Notice of Preparation was published on January 13, 2021 and was publicly circulated for 30 days until February 12, 2021. As such, January 13, 2021 represents the date by which the Project's environmental impacts will be compared (i.e., the environmental baseline). On January 13, 2021, the closure of the Mobile Home Park had already been initiated and RIR No. 05-20 had already been approved and the NOE had been posted for a 30-day period; however, the Mobile Home Park had not yet been officially closed and the majority, if not all, of its residents at the time had not yet left the park or removed their coaches from the premises. As such, to account for the on-the-ground conditions as they occurred on January 13, 2021, the environmental baseline used in this Draft EIR assumes that the Mobile Home Park is fully or near fully occupied with coaches and that all coaches would remain on-site, requiring relocation or disposal. As such, notwithstanding the Mobile Home Park Owner's existing legal right to close the Mobile Home Park in accordance with the conditions and timelines approved under RIR No. 05-20, the environmental impacts associated with disposal or relocation of the coaches is conservatively evaluated as part of the Project considered within this Draft EIR.

Surrounding Land Uses

The Project site is located in a largely developed part of the City, characterized by a mix of residential and commercial uses (see Figure 3-2). The Project site is located to the west of South Avalon Boulevard between I-405 to the north and East 213th Street to the south. The following land uses surround the Project site:

- North: Immediately north of the Project site is the concrete-lined Torrance Lateral Drainage Canal. The area north of the canal is the approximately 157-acre former Cal-Compact landfill site. The site has been the subject of numerous development proposals dating back to the early 2000s. As recently as 2018, the Carson City Council approved a project known as the 2018 District at South Bay Specific Plan Amendment and certified its associated EIR (City of Carson 2022a). The project contemplated residential, regional commercial, and restaurant uses, and plans are in place to develop the northern 61 acres of the site with these uses. However, the City has received a development application to change the land use for the southern 96 acres of the site to a mix of approximately 84 acres of light industrial/logistics uses and approximately 12 acres of community serving commercial/retail uses with publicly accessible passive and active open space areas. This latest development proposal is titled The District at South Bay 2021 and would involve an amendment to the 2018 EIR, known as the 2021 District at South Bay Specific Plan Amendment (City of Carson 2022b). On May 23, 2022, the City Council approved a number of land use entitlements to authorize the District at South Bay 2021 project including but not limited to, a General Plan Amendment, Specific Plan Amendment and Development Agreement.
- East: The land uses to the east of South Avalon Boulevard includes an auto dealership site, with I-405 farther east.
- South: The parcel located adjacent to the southern boundary of the Project site is occupied by an auto dealership and single- and multifamily residential uses.
- West: The land uses south of the Project boundaries along Grace Avenue and to the west are single-family residential uses.

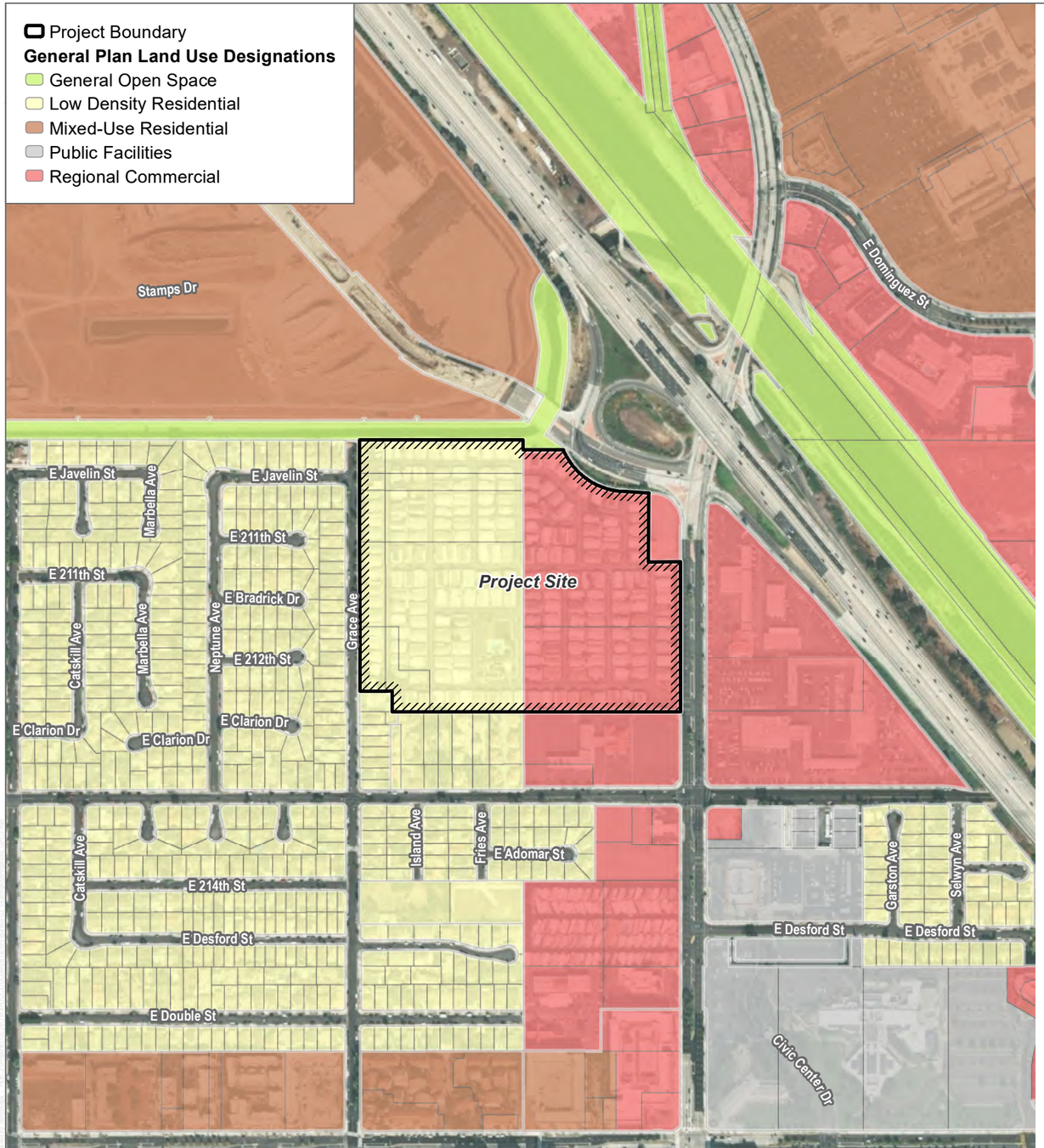
Existing Land Use and Zoning

As shown in Figure 3-3, Existing and Proposed Land Use Designations, the City's General Plan Land Use map designates the Project site as Regional Commercial (east) and Low Density Residential (west) (City of Carson 2015). Per the City's General Plan, Regional Commercial includes uses intended to serve a broad population base and offer a wide range of services to both the community and the region. Businesses in this designation include major

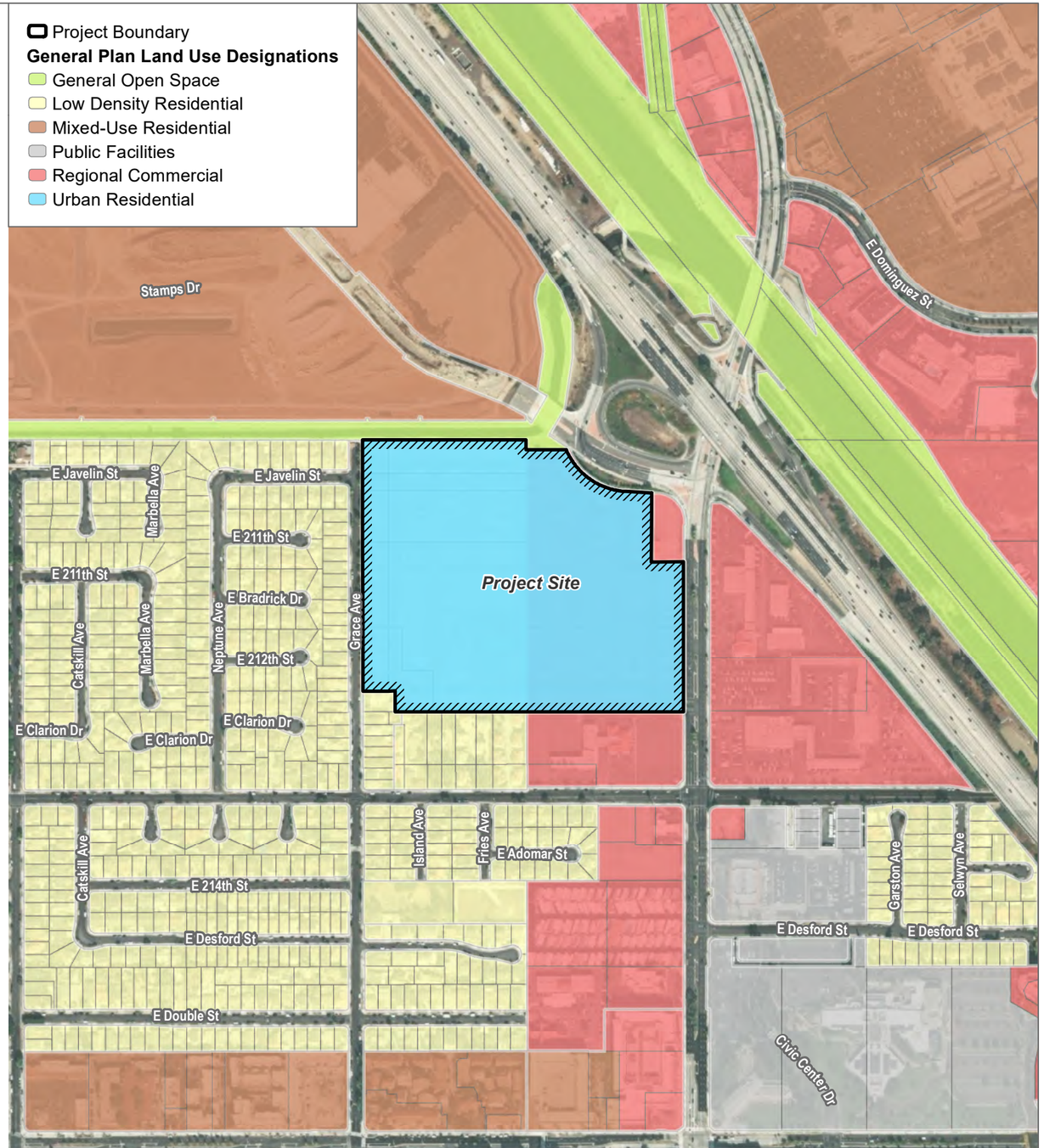
department stores, specialty shops, other retail and service uses, automobile and other vehicle dealerships, and hotels and motels. Regional Commercial is intended to provide for the City's primary regional shopping centers. Low Density Residential includes all residential areas composed of single-family detached dwellings and other development considered harmonious with such low-density residential development. The maximum density allowed is 8 dwelling units per acre (City of Carson 2004). The City of Carson is currently updating its General Plan, and it is currently anticipated that the City will have comprehensively updated its General Plan and prepared an accompanying EIR by late-2022.

As shown in Figure 3-4, Existing and Proposed Zoning, the corresponding zoning for the Project site is Commercial, Automotive (east), and RM-8-D zone (west) (City of Carson 2017). Per the City's Zoning Code, "D" identifies a Design Overlay designation, created "primarily to provide for Site Plan and Design Review of future development within the designated areas in order to achieve special standards of design, architectural quality, style and compatibility, landscape treatment, and functional integration of neighboring developments."

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Existing General Plan Land Use



Proposed General Plan Land Use

SOURCE: Esri and Digital Globe, Open Street Map, SCAG 2016

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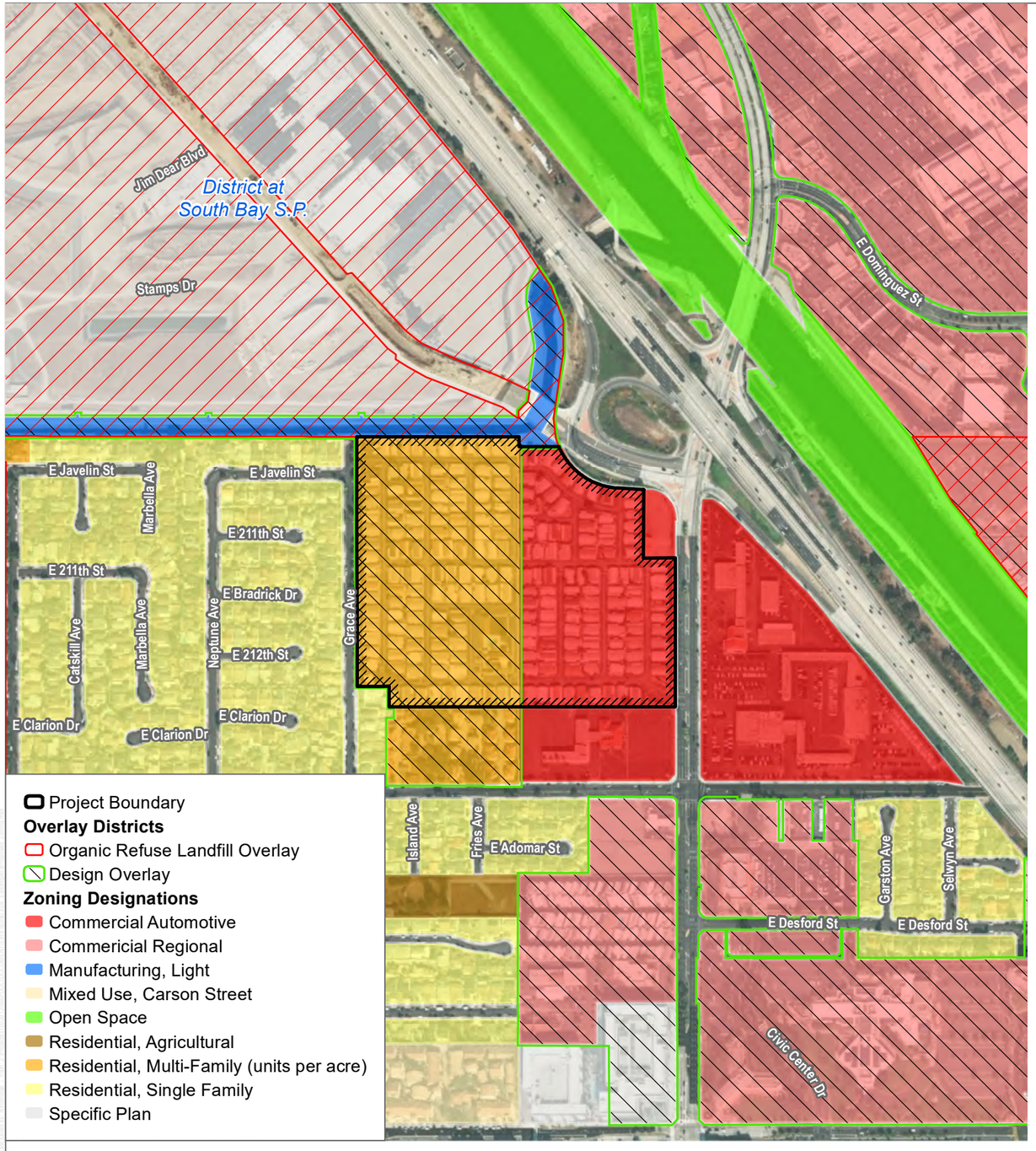
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FIGURE 3-3

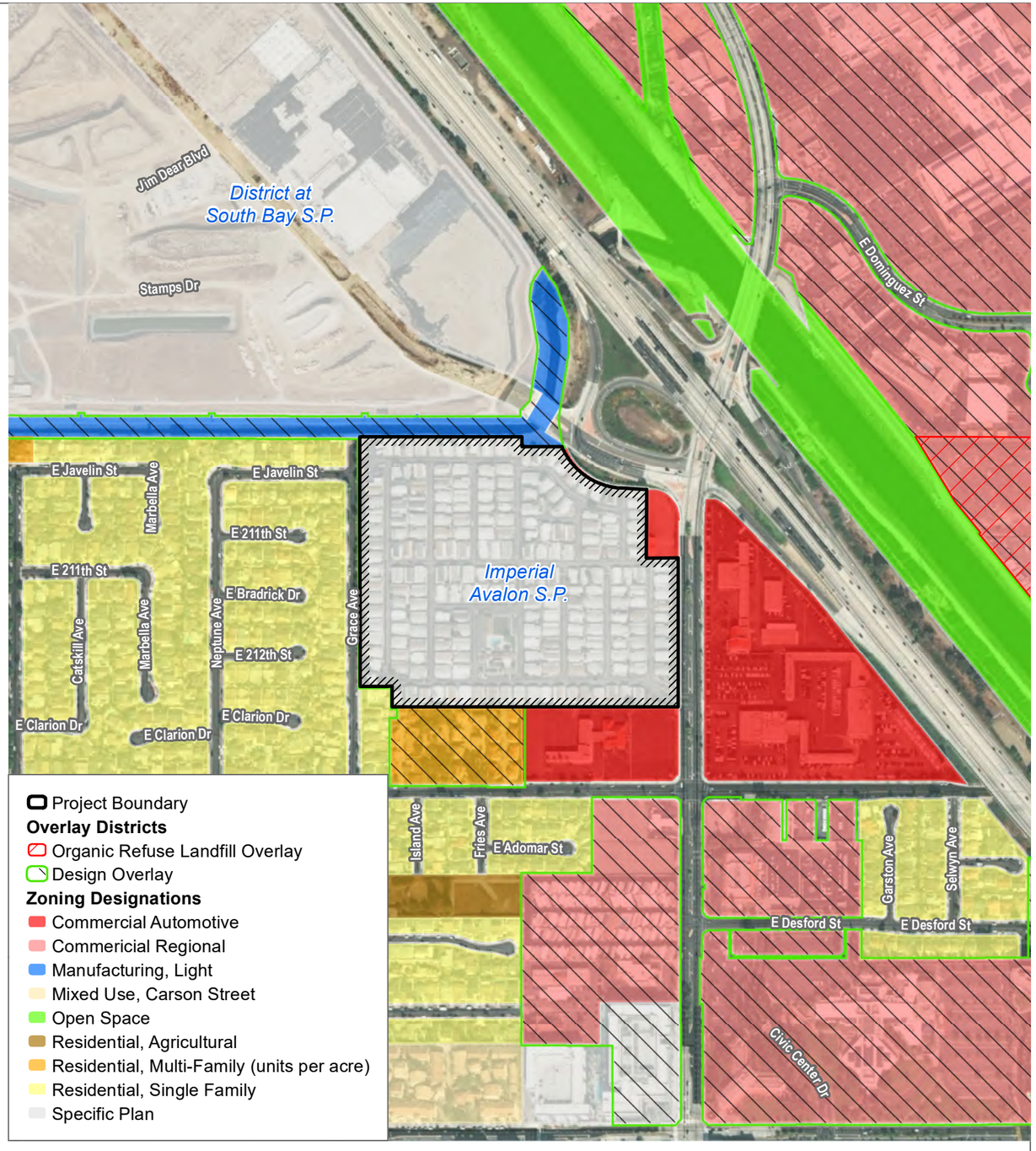
Existing and Proposed Land Use Designations

Imperial Avenue Mixed-Use Project

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Existing Zoning



Proposed Zoning

SOURCE: Esri and Digital Globe, Open Street Map, SCAG 2016

DUDEK

0 250 500 Feet

FIGURE 3-4

Existing and Proposed Zoning

Imperial Avenue Mixed-Use Project

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3.4 Proposed Project

Project Design

Figures 3-5a and 3-5b, Conceptual Site Plan, presents the proposed plan for development of the Project site, which would also be the maximum development scenario allowed under the IASP. Generally, the Project would involve removal of the existing site uses and construction of a mixed-use neighborhood containing multifamily residences, townhomes, neighborhood-serving commercial uses, open space, and parking. The development generally consists of two interconnected halves where the western portion of the site would be developed with for-sale three-story townhomes, and the eastern half of the site would be developed with multistory mixed-use buildings of up to seven stories. The multistory mixed-use buildings would provide a mix of services, restaurants, open space/recreation, and a range of multifamily housing types, including senior living. The Specific Plan would also require that the Project provide an affordable housing benefit to the City which could be satisfied either by providing deed restricted affordable units on-site, off-site, or through payment of an in-lieu fee to be negotiated through a Development Agreement. The various housing types across the entire site would form an integrated community connected by public and private open spaces, including a centrally located, approximately 21,000-square-foot park and dog park, referred to as Central Park, as well as walkable paseos, and plaza spaces. A summary of the Project is presented in Table 3-1.

Table 3-1. Project Buildout Summary

Metric	Project Information
Project Site	1,189,739 Square Feet/ 27.31 acres
Total Residential Units	1,213 Units
Apartments – Non-age restricted[1]	653 units
Apartments – Senior, age-restricted[1]	180 Units
Townhomes[1]	380 Units
Commercial Area	10,352 Square Feet
Residential Parking	2,026 Stalls
Commercial Parking	18 Stalls
Publicly Accessible Park Space	21,300 Square Feet

Notes: All measurements, square footages, and building area ratios provided in this table are approximated.

1 The IASP calls for the development of 180 senior, age-restricted units. A maximum of 1,033 non-age restricted units may be built before the 180 senior units would be required.

Multistory Mixed-Use Component (Buildings/Lots A–D)

The eastern portion of the Project site would contain four multistory mixed-use buildings. The buildings would generally be configured whereby residences would be wrapped around or located above centralized parking structures. Commercial spaces (i.e., restaurants and a café) would be located on ground floors facing Avalon Boulevard and the proposed community park. The buildings would include studios, one-bedroom, and two-bedroom units of various configurations. At-grade gathering spaces would create visual and pedestrian connections between neighboring buildings and the Project's planned central park. Buildings would include leasing offices, recreational amenity spaces, and swimming pools. The buildings were designed in such a way that the residential, and restaurant uses would front onto Avalon Boulevard, with the café fronting the community park, providing an active pedestrian-oriented environment.

Each of the four buildings has an associated building name and corresponding lot name (Buildings/Lots A, B, C, and D). In total, Buildings A–D would provide for up to 833 dwelling units and 10,352 of commercial space. The multifamily building heights would range from 60 feet to 92.5 feet above the street level (accounting for architectural features and rooftop projections).

Assuming the maximum density of non-age-restricted units is achieved, one of the proposed multi-story buildings would be developed with age-restricted independent living units for the City's senior community. These age-restricted units would be studios and one-bedroom units, with interior courtyards over two levels of at- and above-grade podium structured parking. An approximately 5,270-square-foot (non-age restricted) restaurant with an outdoor seating terrace would be located on the ground level of the building.

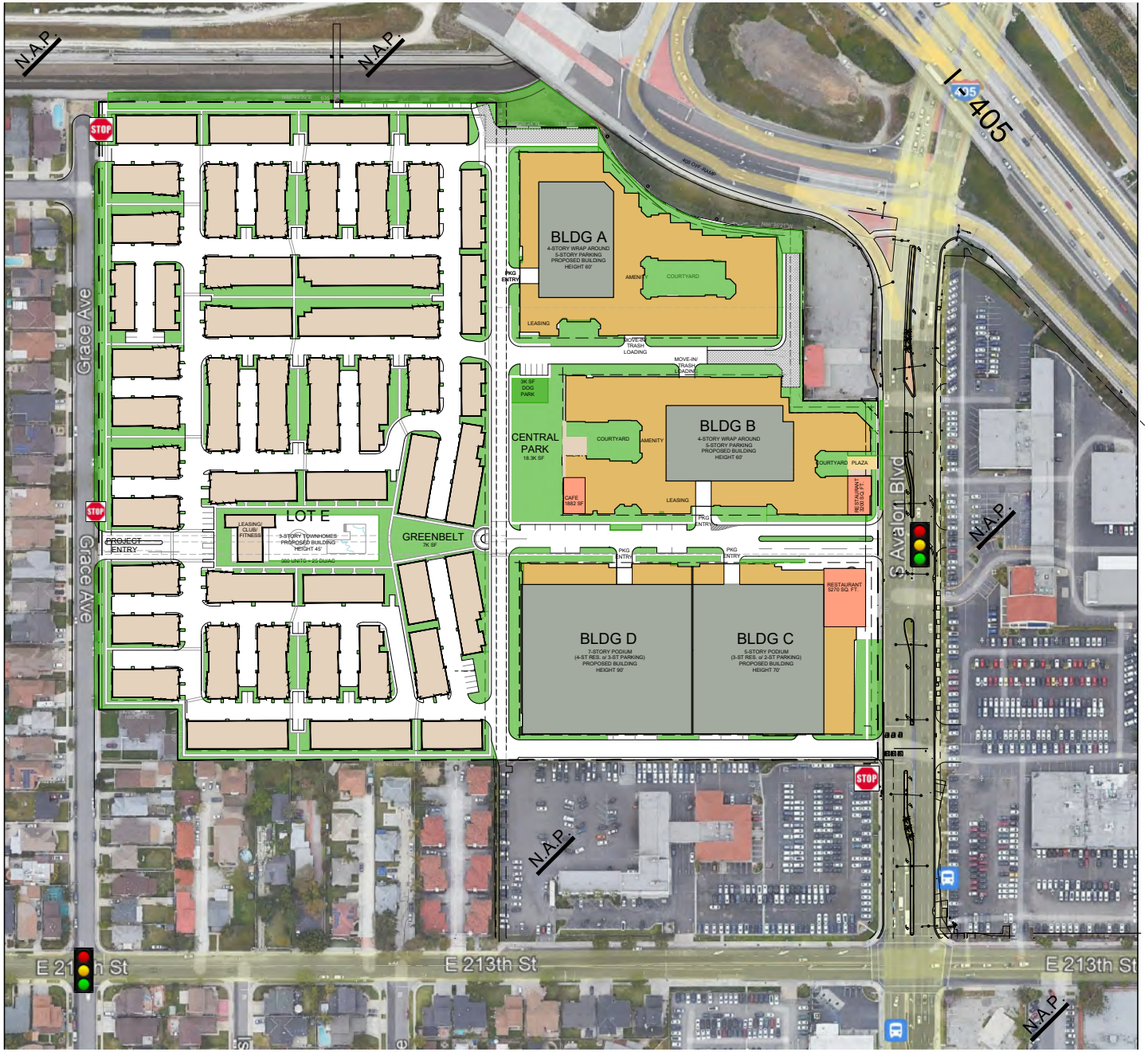
The eastern portion of the Project site would also include a 21,300-square-foot publicly accessible park, named Central Park. The park is central to the development with a café, leasing office space, and amenity spaces located immediately nearby. The Central Park is located at the heart of the Project with walkways, a children's play area, outdoor café seating, a water feature, a shade structure, a performance pavilion, special lighting and landscaping, and pedestrian features. The park would be intended to serve as a civic and cultural focal point and gathering place for both existing and future residents of the City.

Activities in the park may include farmers' markets, neighborhood events, and everyday informal uses such as picnics and children's playtimes. The Central Park would be privately maintained and publicly accessible for the surrounding community. An approximately 3,000-square-foot dog park would be provided within the Central Park space to accommodate pet owners.

A landscaped parkway would act as a buffer between multifamily buildings and the townhome portion of the site to the west, while providing pedestrian connectivity to the central park along the main north-south internal roadway.

Townhomes (Lot E)

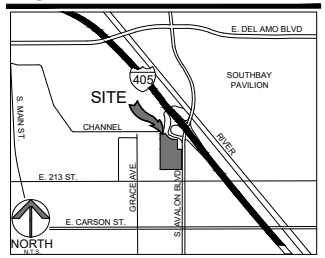
Lot E encompasses the west side of the Project site and would be composed of for-sale townhome condominium units that would provide a transition to the single-family neighborhoods to the west and south of the Project site. Residential dwelling units within the buildings would be two-, three-, and possibly four-bedrooms and would feature private patios, decks, and attached two-car garages. The design of the interior spaces would have a single-family layout, while the architectural massing and articulation of the buildings on the exterior would provide a sensitive transition to the existing single-family homes adjacent to the new community. Similar to the multistory mixed-use half of the site, Lot E would feature publicly accessible walkable greenbelts that would provide residents access to the recreational and commercial opportunities on the eastern portion of the site. A leasing/club fitness facility, common area pool and courtyard areas and private park space would also be included and serve as focal points within the community.

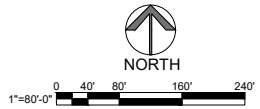


LEGEND

- INDICATES MULTI-FAMILY RESIDENTIAL
- INDICATES TOWNHOMES
- INDICATES COMMERCIAL
- INDICATES DRIVEWAYS/ PARKING STRUCTURE
- INDICATES LANDSCAPING/ PARK
- INDICATES GRASS BLOCK (OR SIMILAR) FIRELANE
- INDICATES SIGNALIZED INTERSECTION
- INDICATES STOP SIGN

VICINITY MAP





Source: AO, 2022

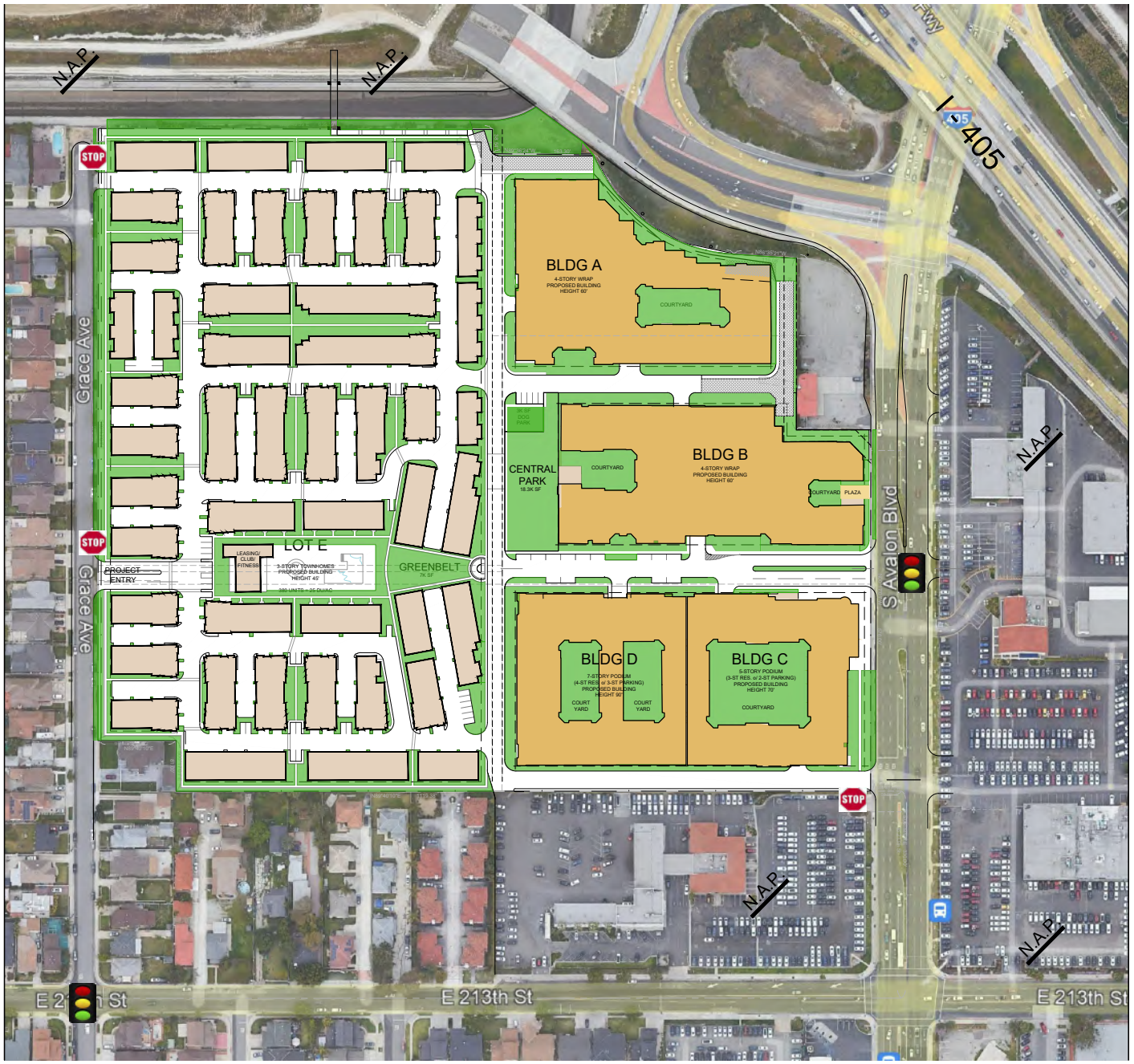
FIGURE 3-5a

Conceptual Site Plan - Ground Floor Layout

Imperial Avalon Mixed-Use Project

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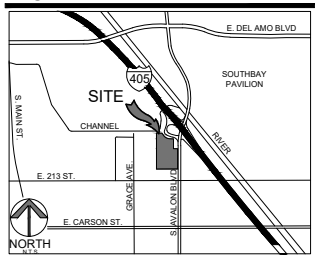
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LEGEND

- INDICATES MULTI-FAMILY RESIDENTIAL
- INDICATES TOWNHOMES
- INDICATES COMMERCIAL
- INDICATES DRIVEWAYS/ PARKING STRUCTURE
- INDICATES LANDSCAPING/ PARK
- INDICATES GRASS BLOCK (OR SIMILAR) FIRELANE
- INDICATES SIGNALIZED INTERSECTION
- INDICATES STOP SIGN

VICINITY MAP



NORTH

1"=60'-0" 0 30' 60' 120' 180'

Source: AO, 2022

FIGURE 3-5b

Conceptual Site Plan - Upper Level Layout

Imperial Avalon Mixed-Use Project

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Detailed Project Design Overview

Table 3-2 summarizes the proposed Project information.

Table 3-2. Project Components

All Project Components		
Project Site	1,189,739 square feet (27.31 acres)	
Parcels	7337-001-025; -026; 027; -028; -029	
Area of Proposed Site Uses in Square Feet (sf)	Building Area (GBA)	Building Area of Residential Uses: 1,527,694
		Building Area of Commercial Uses: 10,352
		Building Area of Parking: 647,027
		Total Building Area (excluding parking): 1,538,046 Total Building Area (including parking): 2,185,073
	Building Area (FAR)	Floor Area Ratio Total Building Area (non-parking floor areas): 1:1.26
Parking	Approximately 2,044 parking spaces and approximately 8 loading spaces (minimum two per multifamily building) would be provided. No subterranean parking levels are being proposed. There would be unbundled parking options for residents and a portion of guest parking to be shared with the 26 commercial spaces provided at Buildings B and C.	
Building Height[1]	Residential building heights will range from 45 to 92.5 feet, including architectural and mechanical projections. The IASP allows for a maximum building height of 90 feet; architectural features and rooftop projections (including but not limited to mechanical equipment, stair-wells, boiler rooms) may exceed the given height limit by a maximum of 15 feet.	
Density (du/ac)	Gross Project Residential density (across entire Project site)– 44.4	
Commercial Areas (Café / Restaurants)		
Square Footage	10,352	
Parking	18 stalls	
Residential		
Square Footage	1,527,694	
Units	653 non age-restricted multifamily units in Buildings A,B, and D	
	180 age-restricted senior independent living units in Building C (assuming build out of maximum density)	
	380 townhome units on Lot E	
Parking	2,026 stalls	
Unit Mix		126 Studios (19%)

Table 3-2. Project Components

All Project Components		
	Multifamily Buildings A, B, and D:	363 1BR (56%)
		164 2BR (25%)
	Independent Living Senior Building C	56 Studios
		124 1BR
	Lot E Townhomes	192 2BR (51%)
		188 3BR (49%)
	Total	**1,213 Units**

Notes: sf = square feet; GBA = gross building area; FAR = floor area ratio; du/ac = dwelling units per acre; BR = bedroom all measurements, square footages, and building area ratios provided in this table are approximated.
[1] Building heights are measured to the peak of the highest projection.

A more detailed description of each building is provided below:

- **Building A** is located in the northeast corner of the Project site, adjacent to the I-405 offramp, the Los Angeles County flood channel, and the District Specific Plan property to the north. Building A consists of a four-story wrap building with 202 residential units comprised of 40 studios, 108 one-bedroom, and 54 two-bedroom units, a leasing office, and recreational uses at the ground level. Recreational amenities include gathering space between Building A and Building B, interior courtyard space, and a swimming pool. Building A would include 308 parking spaces distributed across all four levels within the at- and above-grade parking structure. The building height would be approximately 60 feet.
- **Building B** is located south of Building A, along South Avalon Boulevard. Building B consists of four stories of residential units in a wrap configuration, including 206 units composed of 40 studios, 113 one-bedroom, and 53 two-bedroom units, a leasing office, and recreational uses at the ground level. Recreational amenities include a west-facing courtyard, which opens to an approximately 21,300-square-foot publicly accessible park to the west of the building, an approximately 3,000-square-foot dog park apportioned from the central park space, and an approximately 1,890-square-foot café bounding the park. At the southeast corner of the building, an approximately 3,200-square-foot restaurant would be located at the intersection of Avalon Boulevard and the main Project entrance drive. Parking for Building B would be distributed across all four levels of the at- and above-grade. The parking structure would include 315 total parking spaces provided with approximately 5 stalls to be shared between residential guest and café/restaurant uses. The building height would be approximately 60 feet.
- **Building C** is located in the southeast corner of the Project site east of Building D. Building C consists of a five-story podium building with three levels of residential units and interior courtyards over two levels of at- and above-grade podium structured parking. Building C would provide 180 age-restricted, independent living units comprised of 56 studios and 124 one-bedroom units. Recreational amenities include an internal courtyard and a 5,270 square foot restaurant at the northeast corner of the building. The two-story parking structure would include 218 total parking spaces provided with approximately 13 stalls to be shared between the residential guest and restaurant uses. The building height would be approximately 70 feet.
- **Building D** is located west of Building C and includes four levels of residential units over three levels of at- and above-grade podium structured parking. Building D would include 245 units comprised of 46 studios, 142 one-bedroom, and 57 two-bedroom units, a leasing office, and private recreational uses. Private recreational amenities include two internal courtyards, a swimming pool, and landscaped parkway and road

between Building D and Lot E. The three-story parking structure would include 367 parking stalls. The building height is approximately 92.5 feet at the peak of the highest projection.

- **Lot E** would include 380 for-sale townhomes on the west half of the site adjacent to the existing single-family residential uses. The main entrance to this portion of the Project site is via Grace Avenue with a second access point at the northwest corner also along Grace Avenue. Each of the residential townhome units would be three stories and range from 36 to 45.5-feet in height with an attached two-car garage. The residential dwelling units would consist of 192 two-bedroom units and 188 three-bedroom units. Recreational amenities include a one story leasing/club/ fitness facility near the main entry, with a green belt leading to a pool and leasing/club/fitness facility.

Building Architecture and Design

The Project's architectural concept features a clean and contemporary design, as illustrated in Figures 3-6a through 3.6d, Architectural Elevations, and Figures 3-7a and 3.7b, Conceptual Renderings. The aesthetic design goal of the Project is to provide a form, proportion, and articulation that relates to similar architectural approaches throughout the urban areas of the City and maintains a clean and streamlined composition conveyed in a contemporary manner. Project buildings feature a contemporary style and have architectural projections (i.e. balcony and signage) to provide visual interest. As a whole, the Project utilizes a step-down approach, which involves decreasing height towards the external portion of the Project site to reduce the overall massing along street frontages. Overall, the mixed-use buildings are intended to create a walkable residential community within an urban context. The Project would implement strong vehicular and pedestrian connectivity to respond to the mixed-use nature of the development.

Site Access, Parking, and Loading Areas

Access and Circulation

The Project would have signalized access and egress at one main driveway location, in addition to multiple non-signalized access points. This main Project driveway would provide access to and from Avalon Boulevard and the I-405 interchange. These roadway improvements will provide users with both local and regional connections to the Project.

Figure 3-8, Circulation Plan, illustrates the proposed ingress/egress points for the site. As shown the Project would have the following improved access locations:

1. The Project's main vehicular entrance would be located on Avalon Boulevard. This entrance would form the westbound leg of a new signalized intersection. This entrance would include a median.
2. A secondary stop-controlled right-in/right-out only entrance/exit and fire lane would be located at the southern edge of the Project site along Avalon Boulevard.
3. A stop-controlled full access driveway would be provided along Grace Avenue between the Torrance Lateral Flood Control Channel and 213th Street and would be the Project entry to the townhome areas. This entry may be non-gated or gated to restrict access to only residents/visitors of the 380 townhome dwelling units.
4. A secondary additional access point may be located at the northwest corner of the site along Grace Avenue. Turn movements would be limited to right turn-in and left turn-out only.

Additionally, the Project involves the signalization of the currently stop-controlled Grace Avenue/213th Street intersection. This is incorporated into the Project as Project Design Feature (PDF-)TRA-2.

All of these intersections are addressed within the Project's Local Traffic Assessment (Appendix I).

The Project's proposed internal roadways are also depicted in Figures 3-5a and 3-5b. A number of roadways are proposed to provide access to the Project's parking and loading areas. The Project also employs an internal pedestrian greenbelt linkage concept to provide an internal circulation pattern that embraces and implements the theme of flexibility in routes and provides additional areas of human activity and interaction.

The Project's site plan provides several emergency access points to both Avalon Boulevard and Grace Avenue. The driveway entrance and the garage ramps would be 25 feet wide and the drive aisle width on each garage level would be 25 feet wide. All "Fire Lane/Emergency Vehicle Access Only" drives are 28 feet clear.

Parking

Multifamily Building Parking

Parking for the multistory mixed-use buildings would be provided within parking structures while parking for the townhomes would be provided in garages with some limited on-street parallel parking within the Project site. Within the parking structures, a portion of the parking supply would be reserved for exclusive use by residents and a portion would be reserved for exclusive use by users of the commercial spaces. In addition, some commercial parking would be shared between residential guests and commercial uses in multifamily buildings. Parking levels would provide primarily single parking with limited use of tandem spaces for some larger units where needed.

Per 2019 CALGreen Standards, 10% of the on-site parking spaces would be provided for facilitation of future electric vehicle charging stations. Two temporary loading spaces would be located adjacent to each building. Per 2019 CALGreen Standards, short-term bicycle parking would be provided at a rate of 5% of the visitor vehicular parking stalls, and long-term bicycle parking would be provided at a rate of 5% of the tenant vehicular parking stalls, with convenient access from the street.

Townhome Building Parking

Parking for the townhome units would be provided within garages on the ground floors of the townhome buildings. Surface level parking spaces would be provided for guests and the leasing office. Each townhome unit would be provided with two garage parking spaces per unit.

Multifamily Residential Parking and Transportation Demand Management

As also discussed below in Section 3.7, the Project would also involve the implementation of a number of parking and transportation demand management strategies for the multifamily residential buildings:

- **Senior Housing Shuttle.** When the Project's senior housing component is constructed, assuming build out of the maximum number of non-age-restricted units is achieved, a regularly scheduled shuttle would be provided for senior residents to access shopping and services in the surrounding area. The shuttles would transport groups of senior residents for each trip. Thus, this service would reduce the need for single-occupant vehicle trips to and from the Project site.
- **Unbundled Parking.** For the multifamily rental units, the monthly rent expense allocated to parking would be "unbundled" as a separate, optional line item for residents of the for-rent apartment units. Unbundling the expense of parking would allow tenants to more consciously weigh the costs and benefits of purchasing additional parking spaces and incentivizes reduced overall vehicle ownership.
- **Car Sharing Program.** The Project would include designated parking spaces within the multifamily building parking structures for car sharing vehicles. Car sharing programs allow greater flexibility for residents who

do not own a vehicle but may occasionally require a vehicle for some trips, such as: shopping for larger items recreational activities, visiting family and friends in suburban/rural locations, etc.

- **Workstation Areas.** Workstation areas would be provided within the Project's multifamily residential buildings to facilitate telecommuting. Each resident telecommuter can potentially reduce daily single-occupant vehicle trips, especially peak hour trips.

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MATERIAL LEGEND

1	PAINTED STUCCO - 20/30 FINISH	A	SW 6012 BROWSE BROWN
2	STONE VENEER	B	SW 6992 INKWELL
3	BRICK VENEER	C	SW 7026 GRIFFIN
4	STANDING METAL SEAM ROOF	D	SW 7048 URBANE BRONZE
5	FOAM TRIM	E	SW 7100 ARCADE WHITE
6	VINYL WINDOWS	F	SW 6357 CHOICE CREAM
7	METAL RAILING	G	SW 9160 ARMADILLO
8	METAL AWNING	H	SW 6243 DISTANCE
9	METAL TRELLIS	I	SW 6254 LAZY GRAY
10	METAL FLAT ROOF		

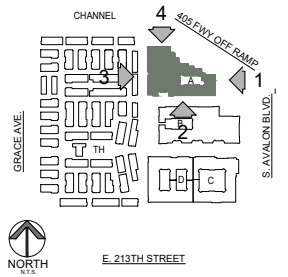


EAST ELEVATION 1



SOUTH ELEVATION 2

KEY MAP



Source: Architecture Design Relationships, 2021

FIGURE 3-6a

Architectural Elevations - Building A

Imperial Avalon Mixed-Use Project

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MATERIAL LEGEND

1	PAINTED STUCCO - 20/30 FINISH	A	SW 6012 BROWSE BROWN
2	STONE VENEER	B	SW 6992 INKWELL
3	BRICK VENEER	C	SW 7026 GRIFFIN
4	STANDING METAL SEAM ROOF	D	SW 7048 URBANE BRONZE
5	FOAM TRIM	E	SW 7100 ARCADE WHITE
6	VINYL WINDOWS	F	SW 6357 CHOICE CREAM
7	METAL RAILING	G	SW 9160 ARMADILLO
8	METAL AWNING	H	SW 6243 DISTANCE
9	METAL TRELLIS	I	SW 6254 LAZY GRAY
10	METAL FLAT ROOF	J	SW 7664 STEELY GRAY

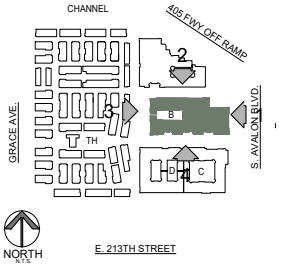


EAST ELEVATION 1



SOUTH ELEVATION 2

KEY MAP



Source: Architecture Design Relationships, 2021

FIGURE 3-6b

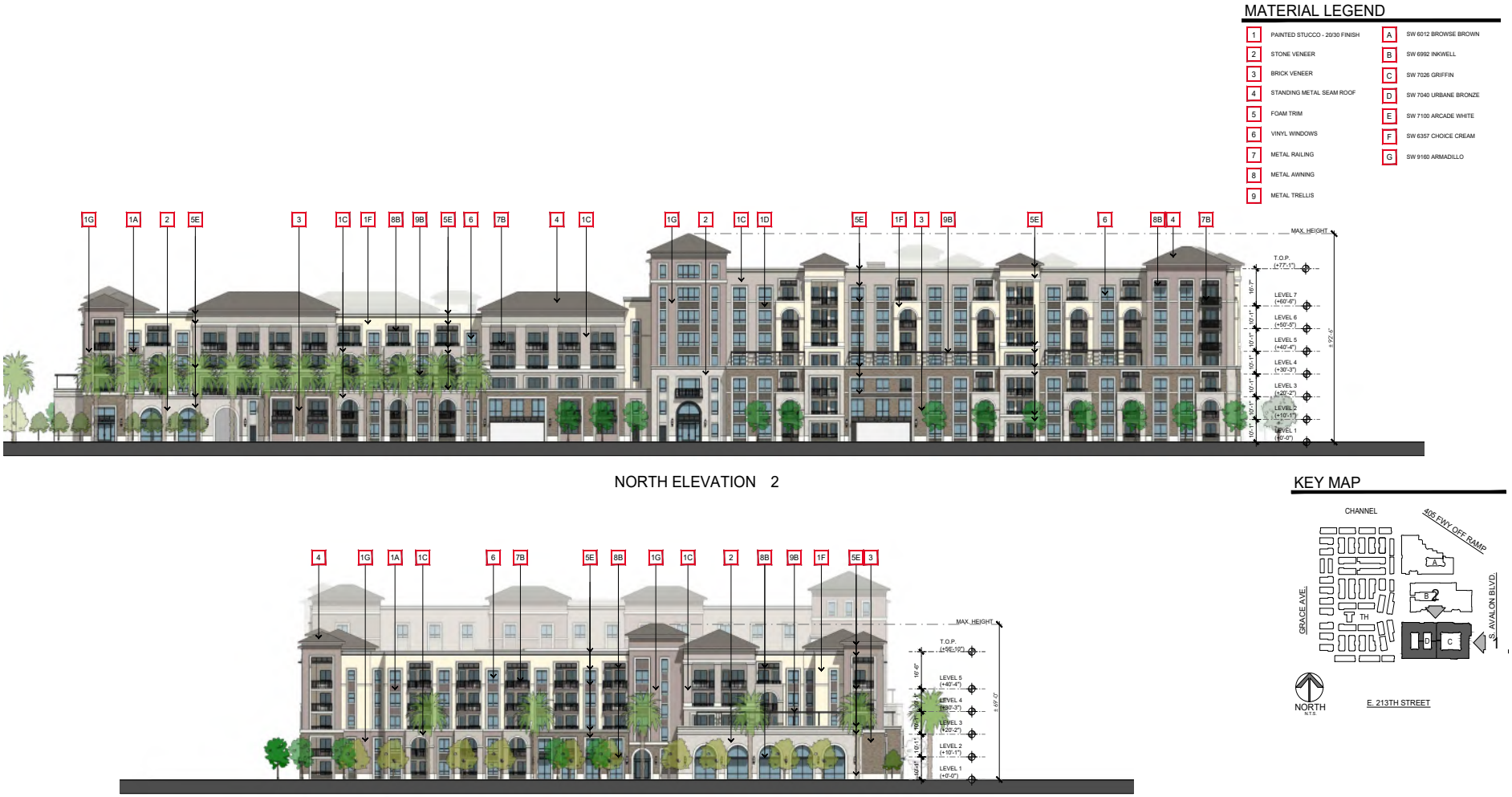
Architectural Elevations - Building B

Imperial Avalon Mixed-Use Project

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Source: Architecture Design Relationships, 2021

FIGURE 3-6c

Architectural Elevations - Buildings C and D

Imperial Avalon Mixed-Use Project

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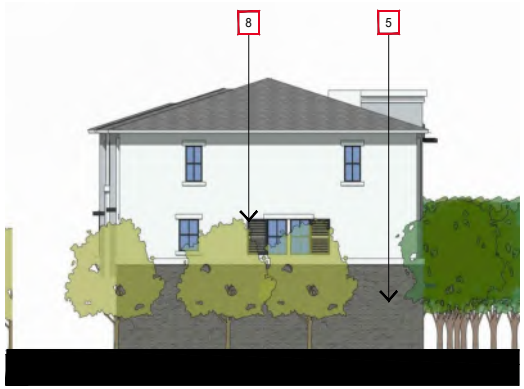
FRONT ELEVATION 1



RIGHT ELEVATION 2



REAR ELEVATION 3



LEFT ELEVATION 4

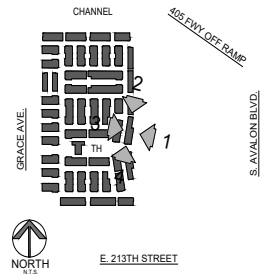
MATERIAL LEGEND

1	ASPHALT SHINGLE ROOF	A	SW 6255 MORNING FOG
2	PAINTED STUCCO - 20/30 FINISH	B	SW 6253 OLYMPUS WHITE
3	METAL AWNING	C	SW 6257 GIBRALTAR
4	FOAM TRIM		
5	BRICK VENEER		
6	VINYL WINDOWS		
7	METAL RAILING		
8	DECORATIVE SHUTTERS		
9	METAL TRELLIS		
10	SECTIONAL GARAGE DOOR		

NOTE: THE EXTERIOR ELEVATION COMPONENTS OF THIS BUILDING (TYPE 3) IS REPRESENTATIVE OF OTHER BUILDING TYPES CONSISTING OF PORTIONS WITH THE SAME OR SIMILAR COMPONENTS AS FOLLOWS: BUILDING TYPES 2, 4, 6 & 11.

THE STYLE ON THIS SHEET IS A1 (STYLE A, COLOR 1). AN ALTERNATE COLOR PALETTE IS PROVIDED ON THE COLOR & MATERIAL BOARD.

KEY MAP



Source: Architecture Design Relationships, 2021

FIGURE 3-6d

Architectural Elevations - Representative of Townhomes

Imperial Avalon Mixed-Use Project

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3 BUILDING C CONCEPTUAL PERSPECTIVE VIEW - LOOKING SOUTHWEST



1 BUILDING C CONCEPTUAL PERSPECTIVE VIEW - LOOKING NORTHWEST

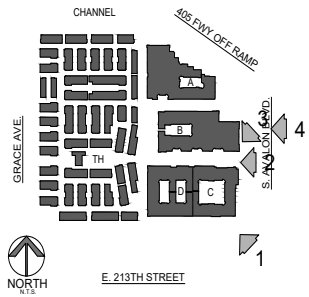


4 BUILDING B CONCEPTUAL PERSPECTIVE VIEW - LOOKING WEST



2 BUILDINGS B & C CONCEPTUAL PERSPECTIVE VIEW - LOOKING WEST

KEY MAP



Source: Architecture Design Relationships, 2021

DUDEK

FIGURE 3-7a

Conceptual Renderings

Imperial Avalon Mixed-Use Project

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7 BUILDINGS B & D CONCEPTUAL PERSPECTIVE VIEW - LOOKING EAST



5 BUILDING A CONCEPTUAL PERSPECTIVE VIEW - LOOKING NORTHWEST

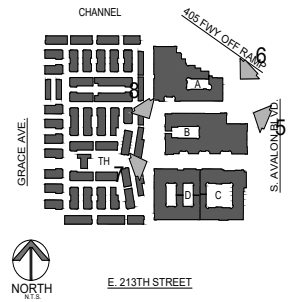


8 BUILDINGS B & D CONCEPTUAL PERSPECTIVE VIEW - LOOKING SOUTH



6 BUILDING A CONCEPTUAL PERSPECTIVE VIEW - LOOKING SOUTHWEST

KEY MAP



Source: Architecture Design Relationships, 2021

DUDEK

FIGURE 3-7b

Conceptual Renderings

Imperial Avalon Mixed-Use Project

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FIGURE 3-8

Circulation Plan

Imperial Avalon Mixed-Use Project

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Landscaping and Open Space

All existing trees within the proposed Project boundary would be removed and new landscaping would be planted throughout the Project. Figure 3-9, Conceptual Landscape Plan, identifies the internal and external landscaping proposed on the Project site. The perimeter and integral streetscapes of the Project site would include landscaping to encourage walkability and pedestrian use of the centrally located plaza and park. The landscape would be designed with predominantly drought tolerant species and natives and seasonal ornamental plantings to provide interest in color and texture. The landscape planting and irrigation would comply with requirements set forth by the City's Municipal Code and the State Model Water Efficiency Ordinance. The plant pallet would incorporate the use of small shrubs, grasses, evergreen trees, accent/flowered trees, and palms along the interior and exterior. The irrigation design would be a fully automatic, underground water use and conservation system with high efficiency and low precipitation rates, using an evapotranspiration weather-based control system. The selection of plant material is based on water efficiency, geographic, cultural, aesthetic, and low maintenance considerations.

The Project would also include interior courtyards and recreation areas to provide areas for both active and passive uses. Buildings A through D each include internal courtyards, Lot E includes a pool and recreational facility. Additional recreational facilities provided within the Project site are described above in previous text.

Pedestrian Bridge

Subject to Los Angeles County Flood Control review and approval, an accessible pedestrian bridge (American with Disabilities Act (ADA) compliant) over the Torrance Lateral Drainage Canal to the north of the site has been proposed to provide pedestrian connectivity between the future development located within the District Specific Plan Area to the north. The bridge would provide both pedestrian and bicycle access. In particular, the pedestrian bridge would connect the Project site with the Carson Country Mart (approved under the District at South Bay 2021 project), which includes a mix of neighborhood commercial and recreational uses.

Utilities

Figure 3-10, Civil Plan, presents the proposed civil/utility plan for the Project and these systems are discussed in further detail below.

Water

Domestic water services would be provided by California Water Service. An existing 12-inch-diameter water main is located in the east side of Avalon Boulevard, adjacent to the Project site to the east. The Project would require construction of new, on-site water distribution lines to serve the new buildings and facilities of the proposed Project using 8-inch-diameter water lines throughout the Project site.

Sewer

Sanitary sewer service would be provided by the Consolidated Sewer Maintenance District run by Los Angeles County Department of Public Works (DPW). Under existing conditions, sewer generated by the Mobile Home Park is conveyed to an 8-inch DPW sewer line within Avalon Boulevard, which then connects to a Sanitation Districts of Los Angeles County (LACSD) 15-inch truck sewer line within 213th Street at the intersection of 213th Street and Avalon. Additionally, while not utilized by the existing Mobile Home Park, a 12-inch LACSD trunk sewer line is located west of the Mobile Home Park within Grace Avenue, which connects to the 15-inch trunk sewer line within 213th Street.

Flows within the LACSD 15-inch trunk sewer line are conveyed west within 213th Street for treatment at the LACSD-owned Joint Water Pollution Control Plant.

The Project would involve a connection to the 12-inch truck sewer line within Grace Avenue and a connection to the 8-inch DPW line in Avalon Boulevard. This 8-inch DPW line would be upsized to a 12-inch line for approximately 350-feet from the Project site's southeastern corner to where it connects to the existing LACSD 15-inch trunk sewer line in 213th Street.

Electricity

Electric service is currently provided to the Mobile Home Park by Southern California Edison via underground lines within Avalon Boulevard. While not utilized by the Mobile Home Park, above-ground lines are located west of the Mobile Home Park on Grace Avenue and south of the Mobile Home Park on 213th Street. The Project would involve connecting to the existing underground lines within Avalon Boulevard. No upgrades to the electrical system (such as substation upgrades, etc.) are expected.

Natural Gas

Gas service is currently provided by Southern California Gas Company. There is one existing 2-inch gas line in Grace Avenue, a 2-inch gas line in 213th Street, a 3-inch gas line in 213th Street, and a 3-inch gas line in Avalon Boulevard. While the ultimate points of connection have not yet been identified, the Project would connect laterally to these existing natural gas lines adjacent to the Project site. No upgrades to the natural gas delivery system are expected.

Telecommunication Facilities

The existing telecommunication services in the vicinity of the Project site are supplied by various utility providers such as Charter Communications, AT&T Distribution South, and Crown Castle. While the ultimate points of connection have not yet been identified, the Project would connect to these existing telecommunication lines adjacent to the Project site.

Stormwater Collection

Stormwater runoff currently flows into v-gutters throughout the P roject site and is collected by various catch basins that drain to an LA County Flood Control District storm drain line that runs through the middle of the Project site. The existing County storm drain line is a 75-inch reinforced concrete pipe that drains into the nearby Torrance Lateral Drainage Canal before draining into the Dominguez Channel. After implementation of the Project, stormwater flows would continue to drain into the 75-inch storm drain line located within the middle of the Project site. The Project's on-site stormwater system would be designed to be in compliance with the County's Low-Impact Development Ordinance. Per the Low-Impact Development Ordinance, post-construction stormwater runoff from new projects must be infiltrated, evapotranspirated, captured and used, and/or treated through high efficiency best management practices on-site for the volume of water produced by the greater of the 85th percentile storm event or the 0.75-inch storm event (i.e., "first flush"). Consistent with Low-Impact Development requirements to reduce the quantity and improve the quality of rainfall runoff that leaves the Project Site, the Project would include the installation of best management practice systems that would be designed with an internal bypass overflow system that would discharge to the 75-inch storm drain to prevent on-site flooding during major storm events.



Source: Architecture Design Relationships, 2021

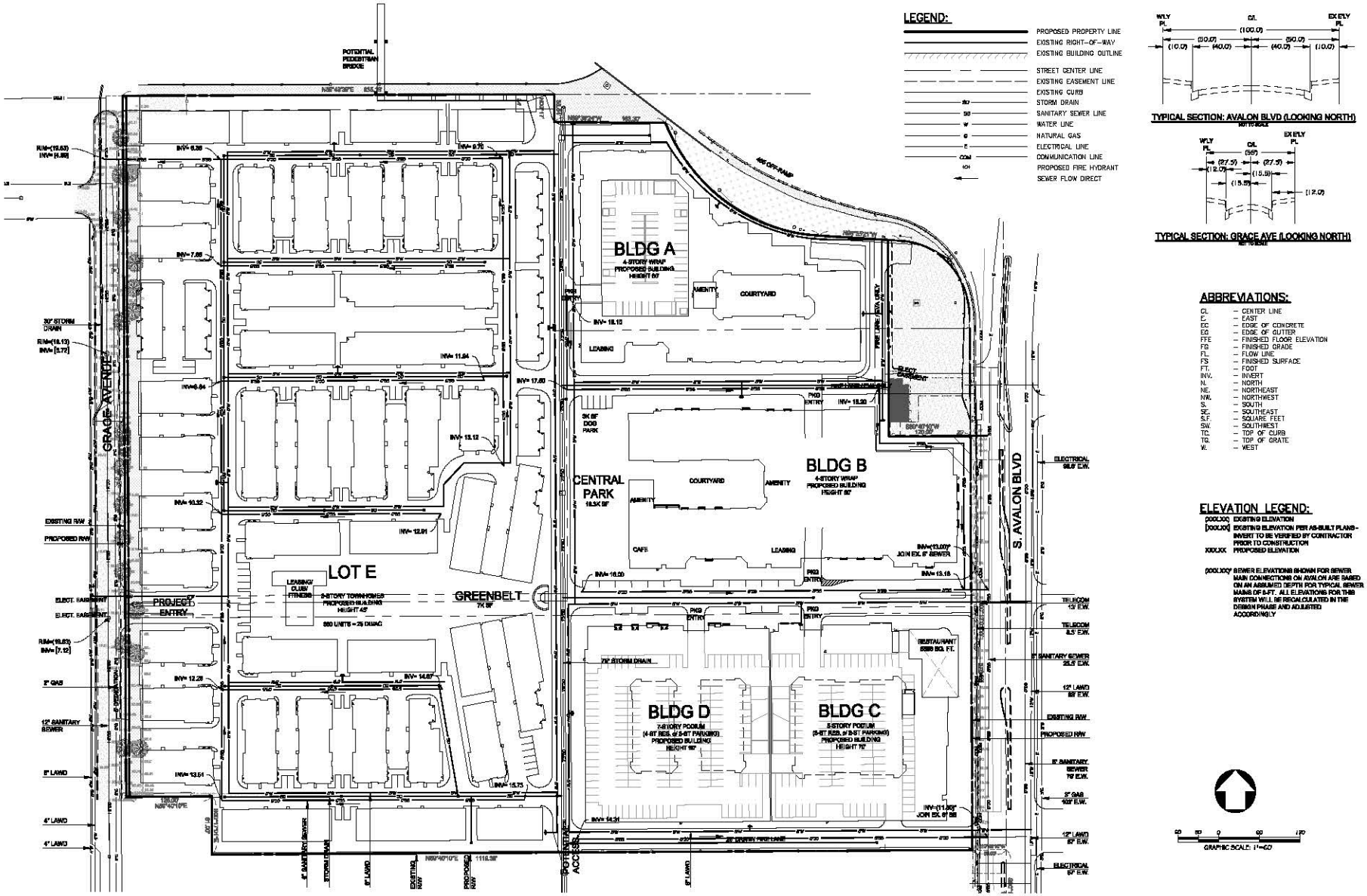
FIGURE 3-9

Conceptual Landscape Plan

Imperial Avalon Mixed-Use Project

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Source: PSOMAS, 2020

FIGURE 3-10

Civil Plan

Imperial Avalon Mixed-Use Project

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3.5 Project Construction

The Project would involve the demolition and removal of all existing structures on the site, the removal of all coaches that may be left behind as residents relocate out of the Mobile Home Park and demolition of remaining structures and features on the Mobile Home Park site. As discussed previously, the removal of all coaches that were on site as of January 13, 2021, is conservatively evaluated as part of the Project considered within this Draft EIR.

Based on information provided by the Project Applicant, it is assumed that construction of the Project would last approximately 60 months. At the time of the preparation of the Project's environmental analysis, it was anticipated that construction would begin in February 2022. However, due to delays, construction is now anticipated to begin in Fall 2022. To maintain consistency with other technical analysis within this Draft EIR, a start date of February 2022 is maintained throughout the EIR because it represents a conservative worst-case scenario for air pollutant and GHG emissions. This is because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years. As such, while construction is anticipated to begin in Fall 2022, the analysis contained herein is based on the following assumptions. Note that construction would involve multiple phases that are anticipated to overlap while other phases are occurring in other parts of the Project site.

- Demolition: February 2022–March 2022
- Grading: March 2022–February 2023
- Building Construction: August 2022–February 2027
- Paving: December 2022–February 2023
- Architectural Coating: December 2025–February 2027

Further details about Project construction are provided in Appendix A of Appendix B-1.

The maximum depth of disturbance is assumed to be 45 feet below the current grade. As discussed in further detail in Section 4.3, Cultural and Tribal Cultural Resources, and Section 4.5, Geology and Soils, fill soils are documented within the Project site's subsurface at depths ranging from approximately 10 feet to as deep as 35 feet. These fills are believed to have been placed on-site during construction of the existing Mobile Home Park during the late 1960s and early 1970s and fill soils are believed to have been sourced both at excavation sites throughout Los Angeles County as well as through the recycling and crushing of large pieces of concrete from highway improvement projects in the area at the time to form the gravel base for the Mobile Home Park. It is anticipated that substantial grading (i.e., processing and compaction of soil) will be required in order to prepare the Project site for the construction of future structures and other improvements. All existing fill materials and any disturbed geologic materials resulting from grading operations would be completely removed and stored on-site before being properly recompacted prior to foundation construction. No export is anticipated, but fills would be supplemented by approximately 120,000 cubic yards of imported structural fill materials as well as demolition debris (i.e., existing concrete and asphalt that will be demolished) that would be intermixed with existing on-site material and reworked on-site.

Construction of the Project is anticipated to be complete in 2027.

3.6 Imperial Avalon Specific Plan

3.6.1 Specific Plan Requirements and Authority

California Government Code Section 65450 states that after a General Plan has been adopted, a specific plan may be prepared for the systematic implementation of the General Plan for all or part of the area covered by the General Plan. The IASP was prepared in accordance with the requirements of the California Government Code (Title 7, Division 1, Chapter 3, Article 8, Sections 65450-65457), which would allow jurisdictions to adopt specific plans to implement their General Plans. Adoption of a specific plan is a legislative act that is conducted in the same manner as a General Plan. The purpose of a specific plan is to provide for the orderly development of a property through compliance with site-specific development standards that are consistent with the intent and policies of the General Plan.

Upon adoption of a specific plan, it becomes the zoning for the site. The proposed IASP would set regulations that govern the allowable land uses, development density, and development standards for future development projects, in place of the City's existing zoning regulations. However, regulations and standards in the City's zoning regulations that are not covered by the IASP would continue to be applicable to future development.

The City of Carson's General Plan designates the Project site for two different uses, Regional Commercial and Low Density Residential. The City is currently updating its General Plan with review and approval of key elements anticipated to come forward for approval in late-2022. Implementation of the Project (including approval of the Draft IASP) would involve a General Plan Amendment and Zoning Amendment. The General Plan Amendment would change the Project site's General Plan designation from Regional Commercial and Low Density Residential (Figure 3-3) to Urban Residential. The zoning amendment would change the zoning district from Commercial, Automotive (east), and RM-8-D zone (west) to "Imperial Avalon Specific Plan" (Figure 3-4). Upon adoption by ordinance, the IASP would constitute the zoning for the Project site and would supersede all zoning regulations to the extent that they would be in conflict with the IASP.

This IASP would be adopted pursuant to Government Code Section 65450 through 65457. Pursuant to Government Code Section 65451, a Specific Plan must include text and a diagram or diagrams which specify all of the following in detail:

- The distribution, location, and extent of the uses of land, including open space within the area covered by the plan.
- The proposed distribution, location, extent, and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the land area covered by the plan and needed to support the land uses described in the plan
- Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.
- A program of implementation measures including regulations, programs, public works projects and financing measures necessary to carry out the above items.
- A discussion of the relationship of the Specific Plan to the General Plan.

The proposed IASP will be available for review on the City's website during the comment period of this Draft EIR (https://ci.carson.ca.us/CommunityDevelopment/ImperialAvalon.aspx). The IASP would provide the essential relationship between the policies of the Carson General Plan and the actual development of the Project site. By functioning as a regulatory document, the IASP would provide a means of implementing the City of Carson's General Plan. All future development plans and entitlements within the IASP boundaries must be consistent with the standards set forth in the IASP. The IASP is anticipated to include the following chapters: Introduction and Background; The Plan; Development Standards; Infrastructure; and Implementation.

3.6.2 Imperial Avalon Specific Plan Development Standards and Regulations

The IASP would establish the land use program, allowable land uses, and the development standards that would apply within the IASP. These development standards and regulations are discussed in the following sections.

Building Intensity

The IASP would allow for a variety of unit types, including townhomes, live-work units, courtyard housing, stacked flats either in a podium or wrapped configuration, and vertical mixed-use building types with residential above commercial. The allowed maximum Project gross residential density would be 45 dwelling units per acre (as measured across the entire Project site, as opposed by future development parcels created through the proposed subdivision map), up to a maximum of 1,213 dwelling units.

Parking and Loading

Dedicated residential unit-specific parking would be provided by parking structures and private garages. Dedicated and shared parking for commercial would be allocated in parking structures and on-street. Guest parking, along with drop-off and loading areas, would also be provided. Electric vehicle charging stations would be provided per California Building Code requirements.

Usable Open Space

Usable open space would be provided throughout the Project in a combination of private open space, common areas, and publicly accessible open space. Studio and one-bedroom units would have a minimum of 125 square feet of open space per unit, and two-, three-, and four-bedroom (if provided) units would have a minimum of 150 square feet of open space per unit.

Landscape Standards

The perimeter landscape is intended to encourage walkability and pedestrian use and would be designed to complement the streetscape character. Internal streetscape design shall encourage pedestrian connectivity to internal and external roadways, the publicly accessible plaza and park areas, and the plaza and park areas dedicated in the Imperial Avalon community. The irrigation system would be designed and constructed to meet and/or exceed model water efficient landscape ordinances.

Lighting

A detailed safety, lighting, and signage lighting plan would be submitted and approved by the Director of Community Development prior to issuance of a building permit. The plan will discuss strategies for avoiding spillover lighting and to ensure pedestrian safety. Lighting for uncovered parking areas, vehicular access ways, and walkways would not exceed a height of 25 feet.

Signage

Signs will announce the presence of the Imperial Avalon Project, welcome visitors and residents, and help users navigate the site. The sign development standards are intended to maximize the identification of IASP as a distinct location in a way that complements the overall image of Carson.

All signs proposed for the Project would be governed by a comprehensive sign program that would provide internal consistency in design style and direction for placement and size of signs, including a standardized wayfinding program. The comprehensive sign program shall also include provisions that ensure that lighting from signs shall not significantly intrude upon or impact adjacent residential uses.

Trash and Recycling

Trash and recycling areas serving multifamily /mixed-use buildings would either be enclosed within a building or within a structure constructed of solid masonry material with a decorative exterior surface finish compatible with the main structure. Each recycling area within a multifamily residential development would be within 250 feet from each living unit. Any planned trash and recycle centralized locations for multifamily buildings, townhomes, and commercial uses will be approved by the waste management provider during the site development review and approved by the Development Director prior to issuance of the first building permit.

Imperial Avalon Specific Plan Inclusionary Housing Requirement

The IASP would include an inclusionary housing requirement, meaning that a portion of future development will need to provide affordable housing options within the City. The IASP would require that developments carried forth under the IASP provide the following affordable housing public benefit:

A. A percentage of deed restricted affordable units at affordability levels to be negotiated in the Project's Development Agreement.

B. The Developer may satisfy any affordable obligations secured through the Development Agreement by providing the affordable units on a different site located anywhere within the City limits. If the IASP affordable housing obligation is satisfied off-site, the developer must (i) obtain a building permit and commence construction of the off-site affordable development prior to issuance of a building permit for the market rate IASP Multifamily buildings and (ii) obtain a certificate of occupancy for the off-site affordable Project prior to issuance of a certificate of occupancy for the market rate IASP Multifamily residential buildings.

C. The City shall utilize the maximum allowable affordable rents for Inclusionary Units, adjusted for family size, as published by the California State Tax Credit Allocation Committee (TCAC) or the United States Housing and Urban Development Department, whichever are greater.

D. In calculating the required number of Inclusionary Units, fractional Units of one-half (.50) or above shall be rounded up to a whole Unit.

E. West Neighborhood units shall be included to calculate the total percentage of required Development Agreement affordable units provided either on or off-site. However, the developer may satisfy the Development Agreement affordable housing requirement exclusively by deed restricting Multifamily units, as opposed to providing affordable units within the West Neighborhood's attached townhomes, detached townhomes or stacked flats).

F. The Developer may also satisfy its affordable benefit obligation by paying an in-lieu affordable housing fee to the City's affordable housing trust fund, rather than providing units on- or off-site. The affordable housing in-lieu fee payment amount shall be established in the Project's Development Agreement.

G. The Developer, at its sole election, may also satisfy the IASP inclusionary housing obligation by complying with the terms of a future citywide inclusionary housing ordnance adopted by the Carson City council.

Implementation

Several levels of subsequent approvals are required to implement the Project after or concurrent with adoption of the IASP. Allowable land uses within the IASP area would be detailed within the IASP. Definitions of allowed land uses are provided in the IASP, and, when not provided in IASP, in Chapter 9 of the Carson Municipal Code.

3.7 Project Design Features

As detailed throughout this Project Description, the Project would include several Project Design Features (PDFs) that would be included as part of the Project. These PDFs will be required of the Project per the Project's conditions of approval. Additionally, they will be tracked and monitored throughout the life of the Project. These features have been consolidated and reproduced below for ease of review.

PDF-AQ-1 **Engine Standards for Off-Road Equipment.** During Project construction, all internal combustion engines/construction equipment operating on the Project site shall meet EPA-certified Tier 4 Interim/Final emissions standards according to the following:

- All off-road diesel-powered construction equipment greater than 50 horsepower shall meet the EPA-certified Tier 4 Interim emission standards, with the exception of grading phase construction equipment greater than 100 horsepower. During the grading phase, all off-road diesel-powered construction equipment greater than 100 horsepower (e.g., excavators, graders, dozers, and scrapers) shall meet the EPA-certified Tier 4 Final (model year 2008 or newer) emission standards. In addition, all construction equipment shall be outfitted with best available control technologies (BACT) devices certified by the California Air Resources Board (CARB). Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 4 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
- A copy of each unit's certified tier specification, BACT documentation, and CARB or South Coast Air Quality Management District (SCAQMD) operating permit (or registration) shall be provided at the time of mobilization of each applicable unit of equipment.

PDF-HAZ-1 **Soil Management Plan.** Prior to initiating any ground disturbing activities on the Project site, the Project Applicant shall prepare a Soil Management Plan that is submitted and approved by the Los Angeles County Health Hazardous Materials Division (HHMD). The Soil Management Plan shall be prepared by a qualified environmental consultant, consistent with the findings of the June 17, 2019 AEC Phase I and II Environmental Site Assessment, or any updates to that report.

During construction, the contractor shall implement the Soil Management Plan. If unidentified or suspected contaminated soil or groundwater evidenced by stained soil, noxious odors, or other factors, is encountered during site preparation or construction activities on any portion of the Project site, the contractor shall stop in the excavation area of potential contamination and notify HHMD. Following oversight from HHMD, the Project Applicant shall retain a qualified professional to collect soil samples to confirm the type and extent of contamination if deemed necessary by HHMD.

If contamination is confirmed to be present, any further ground disturbing activities within areas of identified or suspected contamination shall be conducted according to a site-specific health and safety plan, prepared by a California state licensed professional. The contractor shall follow all procedural direction given by HHMD and in accordance with the Soil Management Plan to ensure that suspect soils are isolated, protected from runoff, and disposed of in accordance with transport laws and the requirements of the licensed receiving facility.

If contaminated soil or groundwater is encountered and identified constituents exceed human health risk levels, ground disturbing activities shall not recommence within the contaminated areas until remediation is complete and a "no further action" letter is obtained from the appropriate regulatory agency or direction is otherwise given that construction can commence. The Project Applicant shall submit the "no further action" letter or equivalent notification to the City prior to resumption of any ground disturbing activity on the relevant portion of the Project site.

PDF-TRA-1 **Transportation Demand Management Plan**: The Project includes residential and restaurant components. This allows for the internal capture of some Project trips, as described in Chapter 3. For example, residents of the Project can walk to the Project's restaurant uses, instead of driving.

Senior Housing Shuttle: Assuming build out of the maximum number of non-age-restricted units is achieved, the Project's senior housing component is constructed, a regularly scheduled shuttle service would be provided for senior residents to access shopping and services in the surrounding area. The shuttles will transport groups of senior residents for each trip. Thus, this service can potentially reduce the need for single-occupant vehicle trips to and from the Project site.

Unbundled Parking: The monthly rent expense allocated to parking will be "unbundled" as a separate, optional line item for residents of the Project's apartment units. Unbundling the expense of parking allows tenants to more consciously weigh the costs and benefits of purchasing additional parking spaces and incentivizes reducing overall vehicle occupancy.

Car Sharing Program: The Project will include designated parking spaces within the multifamily building parking structures for car sharing vehicles. Car sharing programs allow greater flexibility for residents who do not own a vehicle but may occasionally require a vehicle for some trips, such as: recreational activities, visiting family and friends in suburban/rural locations, etc.

Workstation Areas: Workstation areas would be provided within the Project's multifamily residential buildings to facilitate telecommuting. Each resident telecommuter can potentially reduce daily single-occupant vehicle trips, especially peak hour trips.

PDF-TRA-2 **Grace Avenue/213th Street Signalization:** The Project Applicant will signalize the currently stop-controlled Grace Avenue/213th Street intersection.

3.8 Purpose and Need

California's Housing Element law requires that each city and county in the state develop local housing programs designed to meet its "fair share" of existing and future housing needs for all income groups, as determined by the jurisdiction's Council of Governments and the State Department of Housing and Community Development. This "fair

share" allocation concept seeks to ensure that each jurisdiction accepts responsibility for the housing needs of not only its resident population, but also for the jurisdiction's projected share of regional housing growth across all income categories.

In the six-county Southern California region, of which the City is a part, the Council of Governments responsible for assigning these regional housing needs to each jurisdiction is the Southern California Association of Governments (SCAG). The regional growth allocation process begins with the State Department of Finance's projection of statewide housing demand for a multi-year planning period, which is then apportioned by the State Department of Housing and Community Development among each of the state's official regions. SCAG has developed the Final Regional Housing Needs Assessment Allocation Plan for the 2021–2029 period. SCAG's adopted 2021 Final Regional Housing Needs Allocation figures identify an overall construction need of 5,618 new units in Carson.

The Project would provide up to 1,213 high-density residential dwelling units to help offset the City's, region's, and state's need for additional housing supply, as well as providing on-site commercial and food service uses that provide walkable options for Project residents to patronize and work.

3.9 Project Objectives

CEQA Guidelines Section 15124 requires an EIR to include a statement of objectives sought by the project. The objectives assist the City in developing a reasonable range of alternatives to be evaluated in the EIR. The project objectives also aid decision makers in preparing Findings of Fact and a Statement of Overriding Considerations, if necessary. The statement of objectives also includes the underlying purpose of the project and may discuss the project benefits. The Project's specific objectives are as follows:

1. Create a vibrant, new residential neighborhood with neighborhood-serving commercial uses and open-space amenities that furthers the land use, economic development, and urban design goals of the General Plan.
2. Provide new market rate and affordable housing opportunities and potential senior, age-restricted senior units across a mixture of housing products and improving the local jobs/housing imbalance.
3. Assist the City of Carson in meeting its Regional Housing Needs Assessment (RHNA) goals and diversify the City's housing stock.
4. Reduce automobile trips by creating a mixed-use, pedestrian-oriented environment with residences and commercial uses near employment opportunities, recreational facilities, and publicly accessible open space within the City's core and in an area that is served by multiple transit lines.
5. Facilitate pedestrian and bike connectivity between historically disconnected areas within the City through the development of a pedestrian bridge over the Torrance Lateral Drainage Canal, linking the Project site with The District Specific Plan Area and in particular, the Carson Country Mart area (approved under the District at South Bay 2021 project). Providing a connection between the Project site and the District Specific Plan Area would further increase the supply of services, employment opportunities, recreational facilities, and publicly accessibly open space that is available within walking and biking distance to future residents in the area.

3.10 Discretionary Actions

3.10.1 City of Carson

The City, as Lead Agency for the Project, has the responsibility for reviewing, processing, and approving the proposed Project. This Draft EIR is intended to allow for all future discretionary actions related to the proposed Project. If the development proposed results in environmental impacts not assumed within this Draft EIR or covered under the impact analyses and mitigation measures set forth in this Draft EIR, or if substantial changes to the circumstances under which the Project is undertaken and/or new information of substantial importance becomes available after the certification of this Draft EIR, the City will evaluate the need for supplemental environmental documentation per Sections 15162 to 15164 of the State CEQA Guidelines.

The following is a summary of discretionary actions the City of Carson will consider:

- Specific Plan
- Site Plan and Design Review
- General Plan Amendment and Zone Text/Map Amendment
- Development Agreement
- Vesting Tentative Tract Map
- Certification of the Environmental Impact Report

3.10.2 Other Permits and Approvals

Other permits and approvals are required for Project implementation that are not subject to discretionary review, but nevertheless require actions by the Applicant and/or the City to obtain the necessary approvals to implement the proposed Project. Other permits and approvals required, and their respective agency administrators, are listed in the following:

- Los Angeles County Flood Control
  - Aerial easement to allow for construction and continued public use of the proposed pedestrian bridge
- State Water Resources Control Board
  - Coverage under National Pollutant Discharge Elimination System Permit No. CAS000002, General Construction Activity Storm Water Permit and Storm Water Pollution Prevention Plan
  - (May be required) Coverage under National Pollutant Discharge Elimination System Permit No. CAG994004, Waste Discharge Requirements for Discharges of Groundwater from Construction and Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties
- Los Angeles County Public Works permits
- Ministerial permits, including but not limited to grading, haul routes and building permits.

3.11 Intended Uses of this EIR

In compliance with CEQA, this Draft EIR has been prepared to analyze the potential environmental impacts that may result from implementation of the Project. This Draft EIR also identifies feasible mitigation measures and/or alternatives that would minimize or eliminate the potential significant impacts associated with the Project. Lead agencies, such as the City, are charged with the duty to substantially lessen or avoid significant environmental effects where feasible (14 CCR 15002[a][3] and 15021[a][2]). Where a lead agency identifies unavoidable adverse environmental effects of a project, CEQA Guidelines Section 15093 authorizes the agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable adverse environmental effects when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits outweigh the unavoidable adverse environmental effects, these effects may be deemed acceptable by the agency as substantiated in a statement of overriding considerations.

This Draft EIR evaluates potential environmental impacts associated with implementation of the Project and provides information regarding short-term, long-term, direct, indirect, and cumulative environmental effects of the Project. The Draft EIR must allow the City, responsible agencies, and other interested parties, to evaluate the environmental impacts of Project implementation and the environmental consequences of Project implementation, thereby enabling them to make informed decisions regarding the requested entitlements, as described in the following discussion.

3.12 References

City of Carson. 2002. *City of Carson General Plan Environmental Impact Report*. SCH no. 2001091120. Prepared by RBF Consulting. October 30, 2002.

City of Carson. 2004. *City of Carson General Plan*. Adopted October 11, 2004. Accessed January 2022. http://ci.carson.ca.us/content/files/pdfs/planning/CityofCarsonGeneralPlan.pdf.

City of Carson. 2015. City of Carson General Plan –Land Use [map]. Scale not given. Printed August 5, 2015. Accessed January 2022. http://ci.carson.ca.us/content/files/pdfs/GIS/mapgallery /GeneralPlan24x36.pdf.

City of Carson. 2017. Zoning [map]. Scale not given. Printed August 1, 2017. Accessed January 2022. http://gis.carson.ca.us/pdfs/mapgallery/Zoning_11x17.pdf.

City of Carson. 2022a. The District at South Bay Specific Plan/Los Angeles Premium Outlets (LAPO). Accessed January 2022. https://ci.carson.ca.us/CommunityDevelopment/TheDistrict.aspx.

City of Carson. 2022b. The District at South Bay 2021. Accessed January 2022. https://ci.carson.ca.us /CommunityDevelopment/TheDistrict2021.aspx.

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4 Environmental Analysis

The following sections contain an analysis, by issue area, of the potentially significant environmental effects of the Imperial Avalon Mixed-Use Project (Project or proposed Project). The environmental issue areas analyzed in this section are as follows:

- Aesthetics (Section 4.1)
- Air Quality (Section 4.2)
- Cultural Resources and Tribal Cultural Resources (Section 4.3)
- Energy (Section 4.4)
- Geology and Soils (Section 4.5)
- Greenhouse Gas Emissions (Section 4.6)
- Hazards and Hazardous Materials (Section 4.7)
- Hydrology and Water Quality (Section 4.8)
- Land Use and Planning (Section 4.9)
- Noise (Section 4.10)
- Population and Housing (Section 4.11)
- Public Services and Recreation (Section 4.12)
- Transportation (Section 4.13)
- Utilities and Service Systems (Section 4.14)

The discussions of each environmental issue area include the following subsections:

- Existing Conditions
- Relevant Plans, Policies, and Ordinances
- Thresholds of Significance
- Impacts Analysis
- Mitigation Measures
- Level of Significance after Mitigation
- References

As stated in the Notice of Preparation (see Appendix A-1), it was found that the proposed Project would have no impact or less-than-significant impacts relative to the following environmental issue areas:

- Agriculture and Forestry Resources
- Biological Resources
- Mineral Resources
- Wildfire

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4.1 Aesthetics

This section describes the existing visual conditions of the Project site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts, cumulative impacts, and provides mitigation measures related to implementation of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project).

4.1.1 Existing Conditions

This section provides an overview of the regional setting and Project site, including a description of existing visual character and quality in the Project area.

4.1.1.1 Regional Setting

The proposed Project is located in the southern portion of the County of Los Angeles (County) in the City of Carson (City) (see Figure 3-1, Project Location). The Los Angeles County General Plan's Planning Areas Framework provides a mechanism for local communities to work with the County to develop plans that respond to their unique and diverse character. Area plans focus on land use and policy issues that are specific to the Planning Area (County of Los Angeles 2015). The Project is within the South Bay Planning Area, which is bound by the Pacific Ocean on the western border and the Gateway Planning Area and Metro Planning Area on the eastern and northern borders, respectively. The majority of the South Bay Planning Area is comprised of low-elevation areas of the Los Angeles Basin with the exception of the Palos Verdes Peninsula, which consists of hills, open space and communities that abut cliffs and rocky shorelines along the Pacific Coast. The land in the South Bay Planning Area is mostly flat and highly urbanized, with a mix of commercial, office, residential, institutional, public use, and industrial areas. Likewise, the local terrain in the City is also relatively flat, ranging from sea level to 195 feet above mean sea level (City of Carson 2002).

Despite dense urbanization, there are a number of scenic resources in the broader County, including mountains, foothills, ridgelines, forests, deserts, beaches, and coastlines. Scenic resources visible from the Project area include the elevated terrain of the San Gabriel Mountains to the north/northeast and the Palos Verdes peninsula to the southwest.

4.1.1.2 Project Setting

The approximately 27.31-acre Project site is located in the northeast corner of the City, immediately southwest of Interstate (I) 405. The Project site is bound by a concrete-lined channel to the north, South Avalon Boulevard to the east, East 213 Street to the south, and Grace Avenue to the west. The Project site is currently developed with the 228-space, Imperial Avalon Mobile Estates mobile home park (Mobile Home Park). The Mobile Home Park consists of 225 mobile home coaches, a recreational vehicle storage yard with over 20 spaces, and a common area including the clubhouse, grass field, recreation building, swimming pool, and guest parking spaces. The existing site contains minimal landscaping along the boundaries of the interior roads, as well as the common areas. The 225 mobile home coaches vary from single, double and triple-wide homes and are of various ages. Additionally, there 19 trees within the Project site and 23 street trees along the perimeter. The mobile homes are visible from Avalon Boulevard, Grace Avenue, and the I-405/Avalon Boulevard southbound interchange ramps.

Scenic Vistas

Landforms and varied topography such as mountain ranges, coastlines, and hills within the County allow for a variety of long-range views that define the aesthetically diverse communities in the County. These landforms not only create scenic backdrops against developed communities, but also provide environmental and public benefits to residents. While existing scenic resources in Los Angeles County are recognized for their importance as they contrast against developed urban areas, the County General Plan does not identify any officially designated scenic vistas for conservation purposes (County of Los Angeles 2015). Likewise, the City's General Plan does not identify any officially designated scenic vistas within City boundaries (City of Carson 2004). The Palos Verdes Peninsula is the nearest prominent landform to the Project site, located approximately 5.5 miles southwest of the Project site. These hills, open space, and communities abutting cliffs and rocky shoreline are not visible from the Project site due to the distance and intervening development.

Scenic Routes

According to the California Department of Transportation (Caltrans), the County has two officially designated state scenic highways and 11 eligible scenic highways (Caltrans 2021). Route 2 and Route 27, the County's two designated scenic highways, are located 26.8 miles north and 22.8 miles northwest of the Project site, respectively. Route 1 (Pacific Coast Highway), an eligible scenic highway, is the closest to the Project site, located approximately 13.7 miles to the northwest and 10.75 miles to the southeast of the site as the road extends north and south along the coast. None of the County's officially designated or eligible scenic highways are visible from the Project site, nor is the Project site visible from the highways. Further, there are no state designated scenic highways within City boundaries (Caltrans 2021).

Light and Glare

Existing sources of light and glare in the Project area are typical of an urban area, including streetlights, exterior parking lot light, exterior security and safety lighting, illuminated signage, interior and exterior building lighting, and landscape lighting. The existing light sources within the Project site are typical of a mobile-home or residential development (i.e., lamp posts, interior and exterior building lights, and landscape lighting).

4.1.1.3 Project Site Viewshed and Visibility

The Project site is visible from surrounding land uses and roadways. Views of the Project site from surrounding public vantage points consist of the mobile-home units, landscaping around the perimeter of the site, and a perimeter cement block wall. The Project site is relatively flat, and the limits of its viewshed are largely defined by intervening urban development.

Viewer Groups

Views of the Project site are provided to motorists, bicyclists and pedestrians on the surrounding street system, surrounding residents, and visitors frequenting the surrounding commercial areas. A discussion of each viewer group with views to the Project site is provided in the following text.

Residents

Residents of the single-family residential neighborhood and some multi-family residences (located west and south of the Project site off East 213th Street and Grace Avenue) are provided views to the Project site. A perimeter wall and vegetation partially screen views, but homes in the immediate surrounding area have views into the Project site. There are no residential neighborhoods within the Project area to the north or east that would have views into the Project site.

While the views of residents are considered to be of long-term duration, exposure impacts to private views (i.e., views from private property) are not considered significant under the California Environmental Quality Act (CEQA).

Motorists and Pedestrians/Cyclists

Interstate 405

Motorists traveling southbound on I-405 are afforded views of the site when passing by the I-405/Avalon Boulevard interchange, Additionally, motorists on the Avalon Boulevard freeway on- and off-ramps have views of the Project site. Views from the northbound lanes are limited to the existing rooftops of buildings and taller trees within the Project site.

213th Street

Views of the Project site for motorists traveling on 213th Street, west of Avalon Boulevard, are blocked by existing residents and commercial development. Motorists at the 213th Street/Avalon Boulevard interaction are afforded a brief view of the Project entryway and site frontage along Avalon Boulevard.

South Avalon Boulevard

Motorists traveling on South Avalon Boulevard in both the north and south direction have immediate views of the Project site, as the boulevard runs directly along the Project site. Views are sometimes blocked by the existing perimeter wall and landscaping along the site's boundary with Avalon Boulevard.

Grace Avenue

Grace Avenue provides local access to the single-family homes that are adjacent to the eastern boundary of the Project site. Motorists traveling on this road are afforded partially screened and impeded views to the Project site, due to intervening landscaping and the perimeter wall.

4.1.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal regulations related to aesthetics that are applicable to the Project.

State

California Scenic Highway Program

Created by the Legislature in 1963, the California Scenic Highway Program includes highways designated by Caltrans as scenic. The purpose of this program is to preserve and protect the scenic beauty of California highways and adjacent corridors through conservation and land use regulation (Caltrans 2008). As stated in Section 4.1.1, Existing Conditions, there are no designated or eligible state scenic highways near or visible from the Project site.

California Code of Regulations

Title 24 – California Building Standards Code

Title 24, California Building Standards Code, consists of regulations to control building standards throughout the state. The following components of Title 24 include standards related to lighting:

Title 24, Part 1 – California Building Code / Title 24, Part 3 – California Electrical Code

The California Building Code (Title 24, Part 1) and the California Electrical Code (Title 24, Part 3) stipulate minimum light intensities for pedestrian pathways, circulation ways, parking lots, and paths of egress.

Title 24, Part 6 – California Energy Code

The California Energy Code (CEC) (Title 24, Part 6) stipulates allowances for lighting power and provides lighting control requirements for various lighting systems, with the aim of reducing energy consumption through efficient and effective use of lighting equipment. Section 130.2 sets forth requirements for Outdoor Lighting Controls and Luminaire Cutoff requirements. All outdoor luminaires rated above 150 watts shall comply with the backlight, up light, and glare (BUG) ratings in accordance with IES TM-15-11, Addendum A, and shall be provided with a minimum of 40% dimming capability activated to full on by motion sensor or other automatic control. This requirement does not apply to streetlights for the public right-of-way, signs, or building facade lighting.

Section 140.7 establishes outdoor lighting power density allowances in terms of watts per area for lighting sources other than signage. The lighting allowances are provided by the Lighting Zone, as defined in Section 10-114 of the CEC. Under Section 10-114, all urban areas within California are designated as Lighting Zone 3. Additional allowances are provided for building entrances or exits, outdoor sales frontage, hardscape ornamental lighting, building facade lighting, canopies, outdoor dining, and special security lighting for retail parking and pedestrian hardscape.

Section 130.3 stipulates sign lighting controls with any outdoor sign that is on during both day and nighttime hours must include a minimum 65% dimming at night. Section 140.8 of the CEC sets forth lighting power density restrictions for signs.

Title 24, Part 11 – California Green Building Standards Code

The California Green Building Standards Code (CALGreen) (Title 24, Part 24), is commonly referred to as the CALGreen Code. The CALGreen Code stipulates maximum allowable light levels, efficiency requirements for lighting, miscellaneous control requirements, and light trespass requirements for electric lighting and daylighting.

Paragraph 5.1106.8 Light Pollution Reduction, specifies that all non-residential outdoor lighting must comply with the following:

- The minimum requirements in the CEC for Lighting Zones 1-4 as defined in Chapter 10 of the California Administrative Code; and
- BUG ratings as defined in the Illuminating Engineering Society of North America's Technical Memorandum on Luminaire Classification Systems for Outdoor Luminaires (IESNA TM-15-07); and
- Allowable BUG ratings not exceeding those shown in Table A5.106.8 in Section 5.106.8 of the CALGreen Code; or
- Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Illuminating Engineering Society of North America Recommended Practices

Illuminating Engineering Society of North America (IESNA) recommends illumination standards for a wide range of building and development types. These recommendations are widely recognized and accepted as best practices and are therefore a consistent predictor of the type and direction of illumination for any given building type. For all areas not stipulated by the regulatory building code, municipal code, or specifically defined requirements, IESNA standards are used as the basis for establishing the amount and direction of light for the Project. IESNA provides recommendations for pre-curfew and post-curfew light levels to limit light trespass. Pre-curfew is from dusk until 11:00 p.m. local time, when the area being illuminated is more likely to be in use. Post-curfew is from 11:00 p.m. to 7:00 a.m. local time (NLPIP 2007).

The IESNA 10th Edition Lighting Handbook defines lighting zones relative to ambient light levels, which are used to establish a basis for outdoor lighting regulations. The existing conditions surrounding the Project site are best described as lighting zone 3, which has a maximum recommended light trespass limit of 8 lux (0.74 foot-candles) during pre-curfew hours and 3 lux (0.28 foot-candles) during post-curfew hours.

California Vehicle Code

Chapter 2, Article 3 of the California Vehicle Code stipulates limits to the location of light sources that may cause glare and impair the vision of drivers.

> Article 3. Offenses Relating to Traffic Devices [21450–21468] (Article 3 enacted by Stats. 1959, Ch. 3.), Section 21466.5. No person shall place or maintain or display, upon or in view of any highway, any light of any color of such brilliance as to impair the vision of drivers upon the highway.

Local

City of Carson General Plan

The City's General Plan provides a framework for land use decisions within the City. As it pertains to aesthetics and visual character, the City has identified the beautification of views along its roads as an objective, and there are several General Plan policies designed to improve the visual quality of the City. Policies include those such as architectural review of buildings and signs in redevelopment and environmentally sensitive areas, undergrounding of utilities, installation of parkway trees along local streets and highways, installation of landscaped medians, and establishment of monument signs at entrances to the City (City of Carson 2004). Goals and policies related to

aesthetics and visual character and quality of the City that may be applicable to the Project are identified in the following sections.

Economic Development Element

ED-1.4: Strengthen the physical image of Carson through visual enhancement along freeway corridors, major traffic routes, and areas adjoining residential neighborhoods. To this end: aggressively pursue code enforcement activities; develop good design standards; and establish a City identity.

ED-7.2: Improve the actual and perceived image of the City through improved design standards, amenities, security, continuing public improvements, and positive advertising campaigns.

ED-11.1: Encourage the redevelopment and cleanup of underutilized and contaminated land.

Land Use Element

LU-2.1: Require property owners to remove abandoned and/or boarded up buildings that pose safety hazards.

LU-2.2: Continue to aggressively enforce the Property Maintenance Ordinance in order to maintain properties in transition, abandoned commercial and industrial buildings and properties.

LU-3.1: Continue to aggressively enforce the Non-Conforming Use Ordinance in order to eliminate non-conforming and/or incompatible land uses, structures and conditions.

LU-3.3: Encourage compatible land uses to locate in appropriate areas of the City.

LU-7.4: Promote the use of buffers between more intensive industrial uses and residential uses.

LU-9.8: The City shall maintain properties in compliance with applicable regulations and shall incorporate design and maintenance standards to represent a model for private development.

Goal LU-12: Create a visually attractive appearance throughout Carson.

LU-12.3: Review landscape plans for new development to ensure that landscaping relates well to the scale of structures, the land uses it serves, as well as to the surrounding area.

LU-12.5: Improve City appearance by requiring landscaping to screen, buffer and unify new and existing development. Mandate continued upkeep of landscaped areas.

LU-13.1: Promote a rhythmic and ceremonial streetscape along the City's arterial roadways, continuing the use of landscaped medians.

LU-13.3: Continue and, when possible, accelerate the undergrounding of utility lines throughout the City.

LU-13.4: Encourage architectural variation of building and parking setbacks along the streetscape to create visual interest, avoid monotony and enhance the identity of individual areas. And encourage pedestrian orientation by appropriate placement of buildings.

LU-13.5: Continue to require landscaping treatment along any part of a building site which is visible from City streets.

LU-13.7: Ensure proper maintenance of parkways along arterial streets and landscaping of private property visible from the public right-of-way.

LU-14.2: Require new commercial or industrial development adjacent to, and visible from, the freeways and their ramps, to incorporate full architectural and landscape treatment of the building on the freeway side.

Open Space Element

OSC-1.2: Maintain existing landscaping along the City's major streets and expand the landscaping program along other arterial streets throughout the community.

OSC-1.3: Continue to require that adequate, usable and permanent private open space is provided in residential developments.

Transportation Element

Goal TI-7: Provide improved aesthetic enhancements to and maintenance of the City's transportation corridors.

TI-7.2: Encourage the aesthetic quality and maintenance of facilities within the City, under the jurisdiction of other agencies.

City of Carson Zoning Ordinance

The City implements its General Plan through specific plans and zoning. The Zoning Ordinance establishes the regulations for each zoning classification that limit the types of development allowed, and establish design regulations addressing such topics as permitted densities, maximum building heights, setbacks, etc. Project implementation would require a zone change from Commercial, Automotive (east), and RM-8-D zone (west) with Design Overlay to "Imperial Avalon Specific Plan" (see Figure 3-4, Existing and Proposed Zoning).

4.1.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to aesthetics are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to aesthetics would occur if the Project would:

1. Have a substantial adverse effect on a scenic vista.
2. Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
3. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
5. Result in a cumulatively considerable impact with regard to aesthetics.

4.1.4 Impacts Analysis

Would the Project have a substantial adverse effect on a scenic vista?

Less-than-Significant Impact. The City's General Plan does not identify any officially designated scenic vistas within City boundaries (City of Carson 2004). Further, the County General Plan does not identify any officially designated scenic vistas for conservation purposes (County of Los Angeles 2015). Land forms in the County that could be considered valued scenic resources include mountain ranges, such as the San Gabriel, Santa Susana, and Santa Monica Mountains; hills, such as the Chino, Palos Verdes, and Simi Hills; the coastline and Pacific Ocean. The Palos Verdes Peninsula is the nearest prominent landform to the Project site, located approximately 5.5 miles to the southwest. These hills, open space, and communities abutting cliffs and rocky shoreline are not visible from the Project site due to the distance and intervening development. As such, although the Project would result in visual changes on the Project site due to an increase in building height, massing and scale, and increased intensity of use, these changes would not adversely affect a scenic vista. Therefore, impacts related to scenic vistas would be **less than significant**.

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

No Impact. There are no state designated scenic highways within City boundaries (Caltrans 2021). Further, due to distance and intervening development and terrain, none of the County's officially designated (Route 2 and Route 27) or eligible scenic highways are visible from the Project site, nor is the Project site visible from these highways. Therefore, the Project would not substantially damage scenic resources within a state scenic highway and **no impact** would occur with regard to damaging scenic resources within a state scenic highway.

In non-urbanized areas, would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less-than-Significant Impact. California Public Resources Code Section 21071 defines an "urbanized area" as "(a) an incorporated city that meets either of the following criteria: (1) Has a population of at least 100,000 persons, or (2) Has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons." Population projections developed by Southern California Association of Governments indicate that the City's 2020 population is approximately 96,100 people. However, the City is adjacent to the City of Los Angeles to the northwest, south, and southeast, the City of Compton to the northeast, and the City of Long Beach to the east. The combined population of the City and any one of these adjacent Cities is well over 100,000 persons. Therefore, the following analysis considers whether the Project would conflict with applicable zoning or other regulations governing scenic quality.

The policy documents, zoning and other regulations applicable to the Project site, as they relate to scenic quality, are listed in Section 4.1.2, Relevant Plans, Policies and Ordinances.

With regards to local plans and policies, under existing conditions, the Project site is subject to the City's General Plan and Zoning Code. The Project involves the adoption of the Imperial Avalon Specific Plan (IASP), which would establish a new regulatory framework within the IASP area. As discussed in Chapter 4.9, Land Use and Planning, approval of the IASP and implementation of the Project would require a General Plan Amendment and a Zoning Code Change.

The General Plan Amendment would change the Project site's General Plan designation from Regional Commercial and Low Density Residential to Urban Residential. The Project's consistency with the applicable goals and policies of the Land Use Element is provided in in Table 4.9-2 in Section 4.9, Land Use and Planning.

The Zoning Code Change would change the Project site's zoning designation from Commercial Automotive and RM-8-D zone to "Imperial Avalon Specific Plan." Upon adoption by ordinance, the IASP would constitute the zoning for the Project site, and the land use and development standards identified in the IASP would supersede all zoning regulations to the extent that they would be in conflict with the sections of the IASP. The IASP would allow for up to 1,213 dwelling units and 10,352 square feet of commercial/food service uses

Thus, because the Project involves the adoption of a specific plan, which would then prescribe the development standards pertaining to development standards within the IASP area, the proposed Project would not conflict with applicable zoning and other regulations governing scenic quality. Development occurring within the Project site would be required to follow the design guidelines of the IASP, which would serve as the guiding document pertaining to development within the Project site. Impacts would be **less than significant.**

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

Less-than-Significant Impact. As stated above, existing sources of light and glare in the Project area are typical of an urban area, including streetlights, exterior parking lot light, exterior security and safety lighting, illuminated signage, interior and exterior building lighting, and landscape lighting. The existing light sources within the Project site are typical of a mobile-home or residential development (i.e., lamp posts, interior and exterior building lights, and landscape lighting). Thus, although the Project would remove the existing lighting source within the Project site, and would introduce new sources of nighttime lighting, including new exterior light fixtures required for safety, security, and aesthetic purposes for a mixed-use development, the Project would not create a new source of lighting or glare that would be substantial in comparison to the existing setting and surrounding area. Pursuant to Municipal Code Section 9127.1, all exterior lighting installed on the Project site must be directed away from all adjoining and nearby residential property and arranged and controlled so it would not create a nuisance or hazard to traffic or to the living environment. As such, all exterior lighting would be shielded and/or recessed to reduce light trespass (i.e., excessive or unwanted light generated on one property illuminating another property). Therefore, based on compliance with local requirements, impacts associated with light and nighttime glare would be **less than significant.**

Would the Project have cumulatively considerable impacts with regards to aesthetics?

Less-than-Significant Impact. The geographic context for the analysis of cumulative impacts related to aesthetics includes the proposed Project and the immediate Project vicinity as it pertains to scenic vistas, scenic quality, and light and glare. Similar to the proposed Project, new development projects within the surrounding area would also be subject to the environmental review process that would analyze potential impacts associated with aesthetics. These projects would also be subject to the City's General Plan and Zoning Code regulations pertaining to aesthetic resources. As applicable, the aesthetic analyses, impact determinations, and corresponding mitigation measures would be required. As described above, the proposed Project would not result in any potentially significant aesthetic impacts and no mitigation measures are required. Thus, the Project would not result in a cumulative impact pertaining to aesthetics, conflicts with applicable zoning, or other regulations governing scenic quality. In addition, because there are no scenic vistas located within the City, and views of the Palos Verdes Peninsula from other development projects in the Project vicinity would be at a similar distance (approximately 5.5 miles) to that of the proposed Project, the Project would not result in a cumulative impact to scenic vistas. Moreover, cumulative

development within the Project vicinity would be subject to Municipal Code Section 9127.1, as it relates to light and glare development requirements. Additionally, the Project would be a high-quality development that would be of a consistent character with the rest of the area, including Carson Street and Avalon Boulevard areas. Thus, Project development would be required to comply with City regulations, ensuring cumulative aesthetic impacts would remain **less than significant**.

Lastly, because the Project is not located within the vicinity of a state scenic highway, no cumulative impacts to damaging scenic resources within a scenic highway would occur. Therefore, the Project would not contribute to any significant cumulative aesthetic impact and impacts are considered **less than significant**. No mitigation is required.

4.1.5 Mitigation Measures

No mitigation measures would be required.

4.1.6 Level of Significance After Mitigation

Impacts would be less than significant. No mitigation would be required.

4.1.7 References

Caltrans (California Department of Transportation). 2008. Scenic Highway Guidelines. Accessed January 2022 https://dot.ca.gov/-/media/dot-media/programs/design/documents/scenic-hwy-guidelines-04-12-2012.pdf.

Caltrans. 2021. "Scenic Highways: California State Scenic Highways." Accessed January 2022. https://dot.ca.gov /programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways.

City of Carson. 2002. *General Plan Environmental Impact Report*, *Volume II*. Adopted October 30, 2002. Accessed January 2022. http://ci.carson.ca.us/content/files/pdfs/planning/generalplan/EIR.pdf.

City of Carson. 2004. *City of Carson General Plan*. Adopted 2004. Accessed January 2022. https://ci.carson.ca.us /communitydevelopment/generalplan.aspx.

County of Los Angeles. 2015. *Los Angeles County General Plan*. Adopted October 6, 2015. Accessed January 2022. https://planning.lacounty.gov/assets/upl/project/gp_final-general-plan.pdf.

NLPIP (National Lighting Product Information Program). 2007. Lighting Answers. Accessed January 2022. https://www.lrc.rpi.edu/programs/nlpip/lightinganswers/lightpollution/environmentalZones.asp.

4.2 Air Quality

This section describes the existing air quality conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies Project Design Features related to implementation of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project).

Information contained in this section is based on Appendix B-1, Air Quality Assessment, of the Project area conducted by Michael Baker International on August 13, 2021 and Appendix B-2, Construction Health Risk Assessment, conducted by Air Quality Dynamics on October 22, 2021. Other sources consulted are listed in Section 4.2.7, References.

4.2.1 Existing Conditions

4.2.1.1 Climate and Meteorology

The California Air Resources Board (CARB) divides the state into 15 air basins that share similar meteorological and topographical features. The Project site is in the 6,645-square-mile South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, as well as all of Orange County. The SCAB is on a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean on the southwest and high mountains forming the remainder of the perimeter (SCAQMD 1993). SCAB's air quality is determined by natural factors such as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed herein.

SCAB is part of a semi-permanent high-pressure zone in the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. This usually mild weather pattern is occasionally interrupted by periods of extreme heat, winter storms, and Santa Ana winds. The annual average temperature throughout SCAB ranges from low 60°F to high 80°F with little variance. With more oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas.

Contrasting the very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all annual rainfall occurs between the months of November and April. Summer rainfall is reduced to widely scattered thundershowers near the coast, with slightly heavier activity in the east and over the mountains.

Although SCAB has a semi-arid climate, the air closer to the Earth's surface is typically moist because of the presence of a shallow marine layer. Except for occasional periods when dry, continental air is brought into the SCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog are frequent and low clouds known as high fog are characteristic climatic features, especially along the coast. Annual average humidity is 70% at the coast and 57% in SCAB's eastern portions.

Wind patterns across SCAB are characterized by westerly or southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Wind speed is typically higher during the dry summer months than during the rainy winter.

Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During winter and fall, surface high-pressure systems over SCAB, combined with other meteorological conditions, result in very strong, downslope Santa Ana winds. These winds normally continue for a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the diffusion of pollutants by inhibiting the eastward transport of pollutants. SCAB's air quality generally ranges from fair to poor and is like air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.

In addition to the characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which air pollutants are mixed. These inversions are the marine inversion and the radiation inversion. The height of the base of the inversion at any given time is called the "mixing height." The combination of winds and inversions is a critical determinant leading to highly degraded air quality for the SCAB in the summer and generally good air quality in the winter.

4.2.1.2 Air Pollutants of Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state laws. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants.

Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOCs), oxides of nitrogen (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. VOC and NO_X are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between VOC and NO_X in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in Table 4.2-1, Air Contaminants and Associated Public Health Concerns.

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (chronic or carcinogenic [i.e., cancer-causing]) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Table 4.2-1. Air Contaminants and Associated Public Health Concerns

Pollutant	Major Human Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and trucks.	Increases respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between volatile organic compounds (VOC)[1] and oxides of nitrogen (NO_X) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; and aggravates lung and heart problems. Damages plants and reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Source examples include petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid, which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone. Contributes to global warming and nutrient overloading, which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment and in manufactured products. The major sources of lead emissions have historically been motor vehicles (e.g., cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is major source of lead emissions to the air. Highest levels of lead in air generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.

Source: CAPCOA 2018.

[1] Volatile organic compounds (VOCs) (or reactive organic gases [ROGs]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Existing levels of ambient air quality, historical trends, and projections near the Project site are documented by measurements made by the South Coast Air Quality Management District (SCAQMD), SCAB's air pollution regulatory agency that maintains air quality monitoring stations, which process ambient air quality measurements.

O_3 and particulate matter (PM_{10} and $PM_{2.5}$) are pollutants of concern in the SCAB. The closest air monitoring station to the Project site that monitors ambient concentrations of these pollutants is the Long Beach Monitoring Station (located approximately 3.3 miles southeast of the Project site). Local air quality data from 2017 to 2019 is provided in Table 4.2-2, Ambient Air Quality Data. Table 4.2-2 lists the monitored maximum concentrations and number of exceedances of federal or state air quality standards for each year.

Table 4.2-2. Ambient Air Quality Data

Pollutant	Long Beach Monitoring Station[1, 2]		
	2017	*2018*	*2019*
Ozone (O_3)			
1-hour Maximum Concentration (ppm)	0.082	0.074	0.075
8-hour Maximum Concentration (ppm)	0.069	0.064	0.065
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	0	0	0
NAAQS 8-hour (>0.070 ppm)	0	0	0
Carbon Monoxide (CO)			
1-hour Maximum Concentration (ppm)	3.92	4.69	3.05
Number of Days Standard Exceeded			
NAAQS 1-hour (>35 ppm)	0	0	0
CAAQS 1 hour (>20 ppm)	0	0	0
Nitrogen Dioxide (NO_2)			
1-hour Maximum Concentration (ppm)	0.089	0.085	0.072
Number of Days Standard Exceeded			
NAAQS 1-hour (>100 ppm)	0	0	0
CAAQS 1-hour (>0.18 ppm)	0	0	0
Particulate Matter Less Than 10 Microns (PM_{10})			
National 24-hour Maximum Concentration	79.0	84.0	155.8
State 24-hour Maximum Concentration	79.0	84.0	155.8
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 µg/m^3)	N/A	25.8	24.4
CAAQS 24-hour (>50 µg/m^3)	0	0	6.1

Source: All pollutant measurements are from CARB 2018.
Notes: ppm = parts per million; CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards; µg/m^3 = micrograms per cubic meter; N/A = not applicable.

[1] Measurements taken at the Long Beach Monitoring Station located at 2425 Webster Street, Long Beach, California 90810.
[2] PM_{10} and $PM_{2.5}$ measurements taken at the Long Beach Route 710 Monitoring Station located at 5895 Long Beach Boulevard, Long Beach, California 90806.

4.2.1.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive receptors proximate to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, religious facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

The Project site is in the northeast corner of the City of Carson (City), immediately southwest of Interstate (I) 405. The Project site is bound by a concrete-lined channel to the north (the Torrance Lateral), South Avalon Boulevard to the east, East 213 Street to the south, and Grace Avenue to the west. Table 4.2-3, Sensitive Receptors, lists the distances and locations of nearby sensitive receptors, which primarily include residential uses, religious institutions, educational institutions, and recreational facilities.

Table 4.2-3. Sensitive Receptors

Receptor Description	Distance and Direction from the Project Site
Residential Uses	Adjoining south and west
Golden Wings Academy Inc.	1,503 feet north
Carnegie Middle School	2,248 feet southeast
Bonita Street Elementary School	2,711 feet southeast
St. Philomena School	3,235 feet southwest
Carson Street Elementary School	2,337 feet southwest
Judson Baptist Church	4,086 feet south
First Christian Church of Carson	3,227 feet south
Bread of Life Christian Center Church	2,486 feet northeast
Torrance Apostolic Tabernacle	2,687 feet southwest
Carson Spanish Seventh-day Adventist Church	2,756 feet southwest
Harbor Community Church	2,577 feet southwest
St. Philomena Church	3,235 feet southwest
Greater Love Reformed Baptist Church	3,453 feet west
Glory Christian Fellowship Church	4,078 feet northwest
Del Amo Park	3,213 feet north
The Links at Victoria Golf Course	3,143 feet north
Perry Street Mini-Park	3,531 feet southeast
Calas Park	3,633 feet southeast
Carson Park	2,112 feet west

4.2.2 Relevant Plans, Policies, and Ordinances

Federal

Clean Air Act

Air quality is federally protected by the federal Clean Air Act (CAA) and its amendments. Under the CAA, the U.S. Environmental Protection Agency (EPA) developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The CAA requires that each state prepare a State Implementation Plan (SIP) to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The EPA can withhold certain transportation funds from states that fail to comply with the CAA's planning requirements. If a state fails to correct these planning deficiencies within 2 years of federal notification, the EPA is required to develop a federal implementation plan for the identified nonattainment area or areas. The provisions of 40 Code of Federal Regulations Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The EPA has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in Table 4.2-4, State and Federal Ambient Air Quality Standards.

State

California Air Resources Board

CARB administers California's air quality policy. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 4.2-4, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California CAA, which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the SIP for meeting federal clean air standards for the State of California. Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the California CAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous 3 calendar years. Exceedances that are affected by highly irregular or infrequent events, such as wildfires and volcanic eruptions, are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment. The applicable state standards are summarized in Table 4.2-4.

Table 4.2-4. State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]	Federal Standards[2]
Ozone (O_3)[4, 5, 7]	8-Hour	0.070 ppm (137 µg/m^3)	0.070 ppm
	1-Hour	0.09 ppm (180 µg/m^3)	NA

Table 4.2-4. State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]	Federal Standards[2]
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
	1-Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
Nitrogen Dioxide (NO_2)	1-Hour	0.18 ppm (339 µg/m^3)	0.10 ppm[11]
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)
Sulfur Dioxide (SO_2)[8]	24-Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)
	1-Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)
	Annual Arithmetic Mean	NA	0.03 ppm (80 µg/m^3)
Particulate Matter (PM_{10})[3, 6]	24-Hour	50 µg/m^3	150 µg/m^3
	Annual Arithmetic Mean	20 µg/m^3	NA
Fine Particulate Matter ($PM_{2.5}$) [3, 6, 9]	24-Hour	NA	35 µg/m^3
	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3
Sulfates (SO_{4-2})	24-Hour	25 µg/m^3	NA
Lead (Pb) [10, 11]	30-Day Average	1.5 µg/m^3	NA
	Calendar Quarter	NA	1.5 µg/m^3
	Rolling 3-Month Average	NA	0.15 µg/m^3
Hydrogen Sulfide (H_2S)	1-Hour	0.03 ppm (0.15 µg/m^3)	NA
Vinyl Chloride (C_2H_3Cl) [10]	24-Hour	0.01 ppm (26 µg/m^3)	NA

Source: SCAQMD 2016a; CARB 2016.

Notes: ppm = parts per million; µg/m^3 = micrograms per cubic meter; NA = not applicable; mg/m^3 = milligrams per cubic meter.

1 California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the state standard.

2 National standards shown are the "primary standards" designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent 3-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m$_3$. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m^3.

3 Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially averaged across officially designed clusters of sites falls below the standard. National Ambient Air Quality Standards (NAAQS) are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

4 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

5 The national 1-hour ozone standard was revoked by the EPA on June 15, 2005.

6 In June 2002, CARB established new annual standards for $PM_{2.5}$ and PM_{10}.

7 The 8-hour California ozone standard was approved by the CARB on April 28, 2005, and became effective on May 17, 2006.

[8] On June 2, 2010, the EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS however must continue to be used until 1 year following EPA initial designations of the new 1-hour SO_2 NAAQS.

[9] In December 2012, EPA strengthened the annual $PM_{2.5}$ NAAQS from 15.0 to 12.0 µg/m^3. In December 2014, the EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

[10] CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.

[11] National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

Local

South Coast Air Quality Management District

The SCAQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is ensuring that federal and state ambient air quality standards are attained and maintained in SCAB. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, and many other activities. All projects are subject to SCAQMD rules and regulations in effect at the time of construction.

The SCAQMD is also the lead agency in charge of developing the AQMP, with input from the Southern California Association of Governments (SCAG) and CARB. The AQMP is a comprehensive plan that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SCAG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

The 2016 AQMP was adopted by the SCAQMD Governing Board on March 3, 2017. The purpose of the AQMP is to set forth a comprehensive and integrated program that would lead the SCAB into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to update the SCAQMD's commitments towards meeting the federal 8-hour ozone standards. The AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and updated emission inventory methodologies for various source categories.

To ensure air quality goals will be met while maximizing benefits and minimizing adverse impacts to the regional economy, the following policy objectives have guided the development of the 2016 AQMP:

- Eliminate reliance on future technologies (CAA Section 182[e][5]) measures to the maximum extent feasible.
- Calculate and take credit for co-benefits from other planning efforts.
- Develop a strategy with fair-share emission reductions at the federal, state, and local levels.
- Invest in strategies and technologies meeting multiple objectives regarding air quality, climate change, air toxics exposure, energy, and transportation.
- Identify and secure significant funding for incentives to implement early deployment and commercialization of zero and near-zero technologies.

- Enhance the socioeconomic analysis and pursue the most efficient and cost-effective path to achieve multi-pollutant and multi-deadline targets.
- Prioritize enforceable regulatory measures as well as non-regulatory, innovative and "win-win" approaches for emission reductions.

SCAQMD is currently working on the next iteration of the AQMP, the 2022 Air Quality Management Plan (2022 AQMP). The 2022 AQMP will incorporate the recently adopted SCAG's 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS). However, until the adoption of the 2022 AQMP, Project AQMP consistency will be analyzed off the 2016 AQMP and the RTP/SCS that was adopted at the time, the 2016–2040 RTP/SCS.

The SCAQMD has published the California Environmental Quality Act (CEQA) Air Quality Handbook (approved by the SCAQMD Governing Board in 1993 and augmented with guidance for local significance thresholds [LSTs] in 2009). The SCAQMD guidance helps local government agencies and consultants develop environmental documents required by CEQA and identifies thresholds of significance for criteria pollutants for both construction and operation (see discussion of thresholds in the following subsection). With the help of the CEQA Air Quality Handbook and associated guidance, local land use planners and consultants can analyze and document how existing and proposed projects affect air quality, in order to meet the CEQA review process requirements. The SCAQMD periodically provides supplemental guidance and updates to the handbook on their website.

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SCAG is designated as a Metropolitan Planning Organization and under state law as a Regional Transportation Planning Agency and a Council of Governments.

The state and national attainment status designations for SCAB are summarized in Table 4.2-5, South Coast Air Basin Attainment Status. SCAB is currently designated as a nonattainment area concerning the state ozone, PM_{10}, and $PM_{2.5}$ standards, as well as the national 8-hour ozone and $PM_{2.5}$ standards. The SCAB is designated as attainment or unclassified for the remaining state and federal standards.

Table 4.2-5. South Coast Air Basin Attainment Status

Pollutant	Federal	State
Ozone (O_3) (1-Hour Standard)	Non-Attainment (Extreme)	Non-Attainment
Ozone (O_3) (8-Hour Standard)	Non-Attainment (Extreme)	Non-Attainment
Particulate Matter ($PM_{2.5}$) (24-Hour Standard)	Non-Attainment (Serious)	—
Particulate Matter ($PM_{2.5}$) (Annual Standard)	Non-Attainment (Moderate)	Non-Attainment
Particulate Matter (PM_{10}) (24-Hour Standard)	Attainment (Maintenance)	Non-Attainment
Particulate Matter (PM_{10}) (Annual Standard)	—	Non-Attainment
Carbon Monoxide (CO)	Attainment (Maintenance)	Attainment

Table 4.2-5. South Coast Air Basin Attainment Status

Pollutant	Federal	State
(1-Hour Standard)		
Carbon Monoxide (CO) (8-Hour Standard)	Attainment (Maintenance)	Attainment
Nitrogen Dioxide (NO_2) (1-Hour Standard)	Unclassifiable/Attainment	Attainment
Nitrogen Dioxide (NO_2) (Annual Standard)	Attainment (Maintenance)	Attainment
Sulfur Dioxide (SO_2) (1-Hour Standard)	Unclassifiable/Attainment	Attainment
Sulfur Dioxide (SO_2) (24-Hour Standard)	—	Attainment
Lead (Pb) (30-Day Standard)	Unclassifiable/Attainment	—
Lead (Pb) (3-Month Standard)	—	Attainment
Sulfates (SO_{4-2}) (24-Hour Standard)	—	Attainment
Hydrogen Sulfide (H_2S) (1-Hour Standard)	—	Unclassified

Sources: SCAQMD 2016a; EPA 2018.
Note: — = no standard applicable.

Following are the SCAQMD rules that are required for the Project's construction activities:

- **Rule 401 (Visible Emissions)** – A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.
- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} suppression best available control measures are summarized below.
  a. Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
  b. All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.

c. All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
d. The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
e. Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.

- **Rule 431.2** (**Sulfur Content of Liquid Fuels**) – This rule limits the sulfur content in diesel and other liquid fuels for the purpose of both reducing the formation of sulfur oxides and particulates during combustion and to enable the use of add-on control devices for diesel fueled internal combustion engines.
- **Rule 445 (Wood Burning)** – This rule prohibits permanently installed wood burning devices into any new development. A wood burning device means any fireplace, wood burning heater, or pellet-fueled wood heater, or any similarly enclosed, permanently installed, indoor or outdoor device burning any solid fuel for aesthetic or space-heating purposes, which has a heat input of less than one million British thermal units per hour.
- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

City of Carson General Plan

The City of Carson General Plan (General Plan) Air Quality Element discusses how the City plans on reducing total air emissions, educating the public on pollution control measures, minimizing dust generation, and encouraging the use of best available technology within its jurisdiction. The following General Plan goals and policies are applicable to the proposed Project:

Dust Generation

Goal AQ-1: Reduced particulate emissions from paved and unpaved surfaces and during building construction.

Policy AQ-1.1: Continue to enforce ordinances which address dust generation and mandate the use of dust control measures to minimize this nuisance.

Regional Air Quality

Goal AQ-2: Air quality which meets State and Federal standards.

Policy AQ-2.5: Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.

Policy AQ-2.6: Encourage in-fill development near activity centers and along transportation routes.

Policy AQ-2.7: Reduce air pollutant emissions by mitigating air quality impacts associated with development projects to the greatest extent possible.

4.2.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if the Project would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. 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.
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
5. Result in cumulatively considerable impacts with regards to air quality emissions.

South Coast Air Quality Management District

Mass Emissions Thresholds. The SCAQMD significance criteria may be relied upon to make the previously mentioned determinations. According to the SCAQMD, an air quality impact is considered significant if a proposed project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD has established thresholds of significance for air quality during Project construction and operations, as shown in Table 4.2-6, South Coast Air Quality Management District Emissions Thresholds.

Table 4.2-6. South Coast Air Quality Management District Emissions Thresholds

Criteria Air Pollutants and Precursors (Regional)	Construction-Related *Average Daily Emissions (pounds per day)*	Operational-Related *Average Daily Emission (pounds per day)*
Volatile Organic Compounds (VOC)	75	55
Carbon Monoxide (CO)	550	550
Oxides of Nitrogen (NO_X)	100	55
Sulfur Oxides (SO_X)	150	150
Coarse Particulates (PM_{10})	150	150
Fine Particulates ($PM_{2.5}$)	55	55

Source: SCAQMD 2019.

Localized Carbon Monoxide. In addition to the daily thresholds listed, a proposed project would be subject to the ambient air quality standards. These are addressed through an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near a project site is above state and federal CO standards (the more stringent California standards are 20 parts per million (ppm) for 1-hour and 9 ppm for 8-hour). SCAB has been designated as attainment under the 1-hour and 8-hour standards.

Localized Significance Thresholds (LSTs). In addition to the CO hot spot analysis, the SCAQMD developed LSTs for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at new development sites (off-site mobile source emissions are not included in the LST analysis). LSTs represent the maximum emissions that can be generated at a project site

without expecting to cause or substantially contribute to an exceedance of the most stringent national or state ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the Project Source Receptor Area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5.0 acres or less on a single day. Based on the proposed Project construction, the Project is anticipated to disturb a maximum of 3.5 acres per day. The nearest sensitive receptors to the Project site are the mobile home residences located approximately 50 feet (12 meters) to the north. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, as recommended by the SCAQMD, LSTs for receptors located at 25 meters were used in this analysis for receptors closer than 25 meters. Table 4.2-7, Local Significance Thresholds (Construction/Operations), presents the results of localized emissions during Project construction. The City is within SCAQMD SRA 4 (South Coastal LA County). Table 4.2-7 shows the LSTs for a 2-acre project site in SRA 4 with sensitive receptors located within 25 meters of the Project site. LSTs associated with all acreage categories are provided in Table 4.2-7 for informational purposes. Table 4.2-7 shows that the LSTs increase as acreages increase. It should be noted that LSTs are screening thresholds and are therefore conservative. The construction LST acreage is determined based daily acreage disturbed. The operational LST acreage is based on the total area of the Project site. Although the Project site is greater than 5 acres, the 5-acre operational LSTs are conservatively used to evaluate the Project.

Table 4.2-7. Local Significance Thresholds (Construction/Operations)

Project Size	Nitrogen Oxide (NO_x) (pounds per day)	Carbon Monoxide (CO) (pounds per day)	Coarse Particulates (PM_{10}) (pounds per day)	Fine Particulates ($PM_{2.5}$) (pounds per day)
2 Acres (Construction)	82.5	1,165	10.5	6.5
5 Acres (Operation)	99	1,503	4	2

Source: SCAQMD 2009.

Project Design Features

PDF-AQ-1: Engine Standards for Off-Road Equipment. During Project construction, all internal combustion engines/ construction equipment operating on the Project site shall meet EPA-certified Tier 4 Interim/Final emissions standards according to the following:

- All off-road diesel-powered construction equipment greater than 50 horsepower shall meet the EPA-certified Tier 4 Interim emission standards, with the exception of grading phase construction equipment greater than 100 horsepower. During the grading phase, all off-road diesel-powered construction equipment greater than 100 horsepower (e.g., excavators, graders, dozers, and scrapers) shall meet the EPA-certified Tier 4 Final (model year 2008 or newer) emission standards. In addition, all construction equipment shall be outfitted with best available control technologies (BACT) devices certified by the California Air Resources Board (CARB). Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 4 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
- A copy of each unit's certified tier specification, BACT documentation, and CARB or South Coast Air Quality Management District (SCAQMD) operating permit (or registration) shall be provided at the time of mobilization of each applicable unit of equipment.

4.2.4 Impacts Analysis

Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Less-than-Significant Impact. As part of its enforcement responsibilities, the EPA requires that each state with nonattainment areas prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California CAA requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The Project site is located within SCAB, which is under SCAQMD's jurisdiction. The SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which SCAB is in non-attainment. To reduce such emissions, the SCAQMD drafted the 2016 AQMP. The 2016 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, the CARB, the SCAG, and the EPA. The AQMP's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's 2016 RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project is subject to the SCAQMD's AQMP.

Criteria for determining consistency with the AQMP are defined by the following indicators:

- **Consistency Criterion No. 1**: A proposed project would not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of the AQMP's air quality standards or the interim emissions reductions.
- **Consistency Criterion No. 2**: A proposed project would not exceed the AQMP's assumptions or increments based on the years of the project build-out phase.

According to the SCAQMD's CEQA Air Quality Handbook, the purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with CAAQS and NAAQS.

Consistency Criterion No. 1 refers to the CAAQS and NAAQS. As shown in Table 4.2-8, Construction-Related Emissions (Maximum Pounds Per Day), the Project's construction emissions would be below SCAQMD's thresholds while operational emissions would not exceed SCAQMD thresholds with the implementation of project design features. As the Project would not generate localized construction or regional construction or operational emissions that would exceed SCAQMD thresholds of significance, the Project would not violate any air quality standards. Therefore, no significant impact is expected, and the Project would be consistent with the first criterion.

Consistency Criterion No. 2 refers to SCAG's growth forecasts and associated assumptions included in the AQMP. The future air quality levels projected in the AQMP are based on SCAG's growth projections, which are based, in part, on the general plans of cities located within the SCAG region. Therefore, projects that are consistent with the applicable assumptions used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's recommended daily emissions thresholds.

Concerning Consistency Criterion No. 2, it is important to recognize that air quality planning within the SCAB focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the project exceeds the assumptions utilized in preparing the forecasts presented in the 2016 AQMP. Determining whether or not a project exceeds the assumptions reflected in the 2016 AQMP involves the evaluation of the following criterion.

A project is consistent with the 2016 AQMP in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the 2016 AQMP. In the case of the 2016 AQMP, three sources of data form the basis for the projections of air pollutant emissions: the City's General Plan, SCAG's regional growth forecast, and the SCAG 2016–2040 RTP/SCS. The 2016–2040 RTP/SCS also provides socioeconomic forecast projections of regional population growth.

The General Plan designates the Project site for two different uses, Regional Commercial (RC) and Low Density Residential (LDR). The Project site is zoned Commercial, Automotive and RM-8-D. Per the City's Zoning Code, "D" identifies a Design Overlay designation, created "primarily to provide for Site Plan and Design Review of future development within the designated areas in order to achieve special standards of design, architectural quality, style and compatibility, landscape treatment, and functional integration of neighboring developments."

The Project proposes a mixed-use development in accordance with the Imperial Avalon Specific Plan (IASP). The IASP will codify the development standards, design guidelines and implementation strategies for the Project. The uses permitted in the IASP would include residential, commercial, and independent living units for senior residents. The Project would require General Plan and Zoning Code Amendments to accommodate the Specific Plan. Therefore, the proposed Project would be consistent with the General Plan and Zoning Code upon Project approval.

The City's population estimate, as of January 2021, is 91,668 persons. The Project would induce population growth directly through the construction of 1,213 residential units. Assuming 100% occupancy, the maximum population growth associated with Project implementation would be approximately 3,042 persons.[1] This growth would not cause SCAG's 2027 population forecast of 99,880 persons for the City to be exceeded (SCAG 2019). As the Project would not cause SCAG's 2027 population forecast to be exceeded, the Project would not cause the City's General Plan buildout population forecast to be exceeded. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City. Additionally, as the SCAQMD has incorporated these same projections into the 2016 AQMP, it can be concluded that the proposed Project would be consistent with the projections.

The Project would implement various SCAG policies and would be consistent with the SCAG 2016–2040 RTP/SCS. The 2016–2040 RTP/SCS contains measures to achieve vehicle miles traveled reductions required under Senate Bill 375.[2] The proposed Project is a mixed-use project located within a developed portion of the City and would be within 0.25 miles of a bus stop (i.e., Metro Avalon/213th bus stop), which would incentivize residents to take public transportation, would lower criteria pollutant emissions and is consistent with the goals of Senate Bill 375. In addition, the Project would be consistent with the land use envisioned in the IASP and General Plan with a General Plan amendment. As such, the proposed Project meets this AQMP consistency criterion.

1 Refer to Appendix K, Transportation Impact Study, for population factor calculation.

2 Senate Bill 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions. Under Senate Bill 375, CARB is required, in consultation with the state's Metropolitan Planning Organizations, to set regional greenhouse gas reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035.

As stated in Section 4.2.2, Relevant Plans, Policies, and Ordinances, SCAQMD is currently working on the next iteration of the AQMP, the 2022 Air Quality Management Plan (2022 AQMP). The 2022 AQMP will incorporate the recently adopted SCAG's 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS). However, until the adoption of the 2022 AQMP, Project AQMP consistency will be analyzed off the 2016 AQMP and the RTP/SCS that was adopted at the time, the 2016–2040 RTP/SCS.

In conclusion, the determination of 2016 AQMP consistency is primarily concerned with the long-term influence of a project on air quality in the SCAB. The proposed Project would not result in a long-term impact on the region's ability to meet state and federal air quality standards with implementation of Project Design Feature (PDF)-AQ-1. Also, the proposed Project would be consistent with the goals and policies of the 2016 AQMP for control of fugitive dust. As previously discussed, the proposed Project's long-term influence would also be consistent with the SCAQMD and SCAG's goals and policies and is, therefore, considered consistent with the 2016 AQMP. Therefore, the Project would be consistent with this criterion and impacts would be **less-than-significant**.

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?

Short-Term Construction

Short-term air quality impacts are predicted to occur during demolition, grading, construction, paving, and architectural coating operations associated with implementation of the proposed Project. Temporary air emissions would result from the following activities:

- Particulate (fugitive dust) emissions from grading and building construction
- Exhaust emissions from the construction equipment, hauling trucks, and motor vehicles of the construction crew

The Project proposes to demolish an existing mobile home park and construct a mixed-use development. Construction activities are anticipated to start in February 2022 and would take approximately 60 months to complete. It is anticipated that approximately 322,308 square feet of building area would be demolished. Earthwork activities would require approximately 24,827 cubic yards of cut and 123,246 cubic yards of fill, as well as approximately 120,000 cubic yards of import. No export is anticipated. Construction activities would include temporary shoring during the grading phase, off-site utility and signalized intersection improvements during the paving phase, pedestrian bridge construction during the building construction and paving phase, and vapor barrier installation during the building construction phase. Emissions for each construction phase have been quantified based upon the phase durations and equipment types. The analysis of daily construction emissions has been prepared utilizing the California Emissions Estimator Model (CalEEMod) version 2016.3.2.[3] Refer to Appendix B-1, Air Quality Assessment, for the CalEEMod outputs and results. Table 4.2-8 presents the anticipated daily short-term construction emissions.

[3] While there is a new version of CalEEMod, CalEEMod 2016.3.2 was the version in place at the time of the posting of the NOP. The analyses prepared under CalEEMod 2016.3.2 are generally more conservative than those prepared under CalEEMod 2020.4.0. The older model was based on CARB's EMFAC2014 emissions model, which did not capture more recent advanced clean car regulations adopted after 2015 and the accelerated phase-in of partial Zero Emission Vehicles. In addition, CalEEMod 2016.3.2 did not factor in California's 2019 Title 24 standards, which have more stringent energy standards that reduce energy-related emissions from electricity and natural gas use.

Table 4.2-8. Construction-Related Emissions (Maximum Pounds Per Day)

Construction Year	Volatile Organic Compounds (VOCs)	Nitrogen Oxide (NO_X)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
2022	11.06	86.78	160.24	0.44	19.37	6.06
2023	14.50	75.48	158.30	0.44	22.81	6.85
2024	6.76	36.64	69.47	0.24	13.24	3.79
2025	39.52	38.85	77.78	0.27	15.55	4.42
2026	39.24	38.38	74.61	0.26	15.54	4.42
2027	44.20	61.00	112.10	0.45	28.67	8.10
Maximum Daily Emissions	**44.20**	**86.78**	**160.24**	**0.45**	**28.67**	**8.10**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*55*	*150*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Appendix B-1
Notes: SCAQMD = South Coast Air Quality Management District
1 Emissions were calculated using CalEEMod version 2016.3.2. The worst-case winter or summer emissions are presented.
2 The construction emissions incorporate the application of dust control techniques as required by SCAQMD Rule 403. The dust control techniques include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces twice daily; cover stock piles with tarps; water all haul roads three times daily; and limit speeds on unpaved roads to 15 mph.
3 Project emissions include implementation of PDF-AQ-1. PDF-AQ-1 would require that all diesel-fueled construction equipment greater than 50 horsepower meet EPA-certified Tier 4 Interim/Final emissions standards during all phases of construction. The Project emissions results in this table represent the "mitigated" emissions shown in the CalEEMod output sheets in Appendix B-1.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust (PM_{10} and $PM_{2.5}$) emissions that may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the Project area. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill, and truck travel on unpaved roadways (including demolition as well as construction activities). Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust from demolition, grading, and construction is expected to be short-term and would cease upon Project completion. Additionally, most of this material is inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to health.

Dust (larger than 10 microns) generated by such activities usually becomes more of a local nuisance than a serious health problem. The amount of PM_{10} (particulate matter smaller than 10 microns) generated as a part of fugitive dust emissions is a particular health concern. PM_{10} poses a serious health hazard alone or in combination with other pollutants. $PM_{2.5}$ is mostly produced by mechanical processes. These include automobile tire wear, industrial processes such as cutting and grinding, and re-suspension of particles from the ground or road surfaces by wind and human activities such as construction or agriculture. $PM_{2.5}$ is mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_X and sulfur oxides (SO_X) combining with ammonia. $PM_{2.5}$ components from material in the earth's crust, such as dust, are also present, with the amount varying in different locations.

As indicated in Table 4.2-8, total PM_{10} and $PM_{2.5}$ emissions would be below SCAQMD thresholds. Therefore, particulate matter impacts during construction would be **less than significant**.

VOC Emissions[4]

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates VOC emissions, which are O_3 precursors. In accordance with the methodology prescribed by the SCAQMD, the VOC emissions associated with paving have been quantified with CalEEMod. Architectural coatings were also quantified with CalEEMod based upon the size of the buildings.

The highest concentration of VOC emissions would be generated during the application of architectural coatings on the buildings. As required by SCAQMD, all architectural coatings for the proposed Project structures would comply with SCAQMD Regulation XI, Rule 1113 – Architectural Coating. Rule 1113 provides specifications on painting practices as well as regulates the VOC content of paint (SCAQMD 2016b). As shown in Table 4.2-8, Project construction would not result in an exceedance of VOC emissions during any years of construction. Therefore, impacts would be **less than significant** in this regard.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the Project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to and from the site. The majority of construction equipment and vehicles would be diesel powered, which tends to be more efficient than gasoline-powered equipment. Diesel-powered equipment produces lower carbon monoxide and hydrocarbon emissions than gasoline equipment, but produces greater amounts of NO_X, SO_X, and particulates per hour of activity (Sullivan et al. 2004). As presented in Table 4.2-8, unmitigated construction equipment, truck and worker vehicle exhaust emissions would not exceed SCAQMD thresholds. Notwithstanding, the Project would implement PDF-AQ-1 to further reduce construction emissions. PDF-AQ-1 would require that all diesel-fueled construction equipment greater than 50 horsepower meet EPA-certified Tier 4 Interim/Final emissions standards during all phases of construction. Tier 4 Interim/Final standards regulate the amount of NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions from nonroad (or off-road) diesel engines. Tier 4 Interim/Final standards require emissions of NO_X, PM_{10}, and $PM_{2.5}$ to be reduced by 90 percent from Tier 1-3 standards. Compared to the previously adopted Tier 1-3 standards, the use of control technologies such as exhaust gas aftertreatment (oxidation catalysts) in addition to advanced engine design allows the more stringent Tier 4 standards to be met (OFR 2021; ICCT 2021). Further, standard SCAQMD regulations, such as maintaining all construction equipment in proper tune, shutting down equipment when not in use for extended periods of time, and implementing SCAQMD Rule 403 would be adhered to. As noted in Table 4.2-8, construction equipment exhaust would not exceed SCAQMD thresholds with implementation of PDF-1. Therefore, impacts are **less than significant** in this regard.

Overall Construction Emissions

CalEEMod was used to model construction emissions for VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. As indicated in Table 4.2-8, unmitigated construction emissions would not exceed SCAQMD thresholds for any criteria pollutants. Further, the Project would implement PDF-AQ-1 to further reduce construction emissions. As such, construction emissions would be **less than significant**.

[4] ROGs and VOCs are subsets of organic gases that are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. Although they represent slightly different subsets of organic gases, they are used interchangeably for the purposes of this analysis.

Long-Term Operations

Operational emissions generated by both stationary and mobile sources would result from normal daily activities on the Project site after occupation (i.e., increased concentrations of VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$). Mobile source emissions would be generated by the motor vehicles traveling to and from the Project site. Stationary area source emissions would be generated by consumption of natural gas for space and water heating devices, operation of landscape maintenance equipment, and use of consumer products. Stationary energy emissions would result from natural gas consumption associated with the Project. Analysis of mobile emissions is based primarily upon the Imperial Avalon Project Local Transportation Assessment (Transportation Assessment) prepared by Fehr and Peers found in Appendix I. The analysis of daily operational emissions has been prepared using CalEEMod. CalEEMod model runs were conducted for both the existing conditions and the proposed Project (Appendix B-1). Further, vehicle emission factors were taken from CARB's 2017 Emission Factor (EMFAC2017) model.

Existing Operational Emissions

The existing Project site is currently developed with the Imperial Avalon Mobile Estates mobile home park (Mobile Home Park), which consists of 225 mobile home coaches, a recreational vehicle storage yard, and a common area with a clubhouse, grass field, recreation building, swimming pool, and guest parking spaces. A CalEEMod model run was conducted to quantify the existing operational emissions from the Mobile Home Park; refer to Table 4.2-9, Existing Operational Air Emissions. Trip generation rates associated with the existing use were based on the Transportation Assessment. According to the Transportation Assessment, the existing Project site generates approximately 1,141 mobile daily trips.

Table 4.2-9. Existing Operational Emissions (Maximum Pounds Per Day)

Source	Volatile Organic Compounds (VOCs)	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Existing Summer Emissions						
Area Source Emissions	6.77	3.57	20.05	0.02	0.37	0.37
Energy Emissions	0.04	0.38	0.16	0.00	0.03	0.03
Mobile Emissions	2.16	4.36	24.72	0.08	8.37	2.26
Total Emissions	**8.97**	**8.31**	**44.93**	**0.10**	**8.78**	**2.66**
Existing Winter Emissions						
Area Source Emissions	6.77	3.57	20.05	0.02	0.37	0.37
Energy Emissions	0.04	0.38	0.16	0.00	0.03	0.03
Mobile Emissions	2.22	4.62	23.81	0.07	8.32	2.26
Total Emissions	**9.04**	**8.58**	**44.03**	**0.10**	**8.72**	**2.66**

Source Appendix B-1.

1 Emissions were calculated using CalEEMod version 2016.3.2 and EMFAC2017, as recommended by the SCAQMD.

2 Based on CalEEMod results, worst-case seasonal emissions have been modeled.

3 Rule 445 prohibits installation of any open or enclosed permanently installed wood burning device beginning construction after March 9, 2009. As the existing use consists of a mobile home park, wood burning devices were assumed to not be present under existing conditions to provide a conservative analysis.

[4] Under 2019 Title 24 standards, nonresidential buildings will use about 30% less energy, mainly due to lighting upgrades, when compared to nonresidential buildings constructed under 2016 standards, and residential buildings will use about 53% less energy than those under the 2016 standards. (Source: California Energy Commission, 2019 Building Energy Efficiency Standards, https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf.)

Project Operational Emissions

The proposed Project would construct a mixed-use development consisting of approximately 10,352 square feet of café/restaurant space and 1,213 residential units, as well as residential amenities and open space areas. Table 4.2-10, Net Operational Air Emissions, presents the anticipated net Project operational emissions compared to the existing use. The net operation emissions were calculated by subtracting the existing use emissions from the proposed Project emissions. The proposed Project would include operational emission reductions from the most current building energy efficiency standards—the 2019 Title 24 and 2019 California Green Building Standards Code (CALGreen), including installation of photovoltaic solar panels and electric vehicle charging stations. As shown in Table 4.2-10, net operational emissions would not exceed SCAQMD thresholds.

Table 4.2-10. Net Operational Emissions (Maximum Pounds Per Day)

Source	Volatile Organic Compounds (VOC)	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Project Summer Emissions						
Area Source Emissions	38.47	19.26	107.85	0.12	2.02	2.02
Energy Emissions	0.32	2.74	1.43	0.02	0.22	0.22
Mobile Emissions	12.64	26.47	136.61	0.44	46.50	12.55
Total Emissions	**51.43**	**48.48**	**245.88**	**0.57**	**48.74**	**14.79**
Existing Total	*8.97*	*8.31*	*44.93*	*0.10*	*8.78*	*2.66*
Net Total Emissions	**42.46**	**40.16**	**200.95**	**0.47**	**39.96**	**12.13**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Project Winter Emissions						
Area Source Emissions	38.47	19.26	107.85	0.12	2.02	2.02
Energy Emissions	0.32	2.74	1.43	0.02	0.22	0.22
Mobile Emissions	13.01	28.07	131.93	0.42	46.18	12.55
Total Emissions	**51.80**	**50.07**	**241.20**	**0.56**	**48.42**	**14.79**
Existing Total	*9.04*	*8.58*	*44.03*	*0.10*	*8.72*	*2.66*
Net Total Emissions	**42.76**	**41.49**	**197.18**	**0.46**	**39.70**	**12.13**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*

Table 4.2-10. Net Operational Emissions (Maximum Pounds Per Day)

Source	Volatile Organic Compounds (VOC)	Nitrogen Oxide (NO_X)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Exceeds Threshold?	No	No	No	No	No	No

Source Appendix B-1.
Notes: SCAQMD = South Coast Air Quality Management District.
1. Emissions were calculated using CalEEMod version 2016.3.2 and EMFAC2017, as recommended by the SCAQMD.
2 Rule 445 prohibits installation of any open or enclosed permanently installed wood burning device beginning construction after March 9, 2009. Therefore, SCAQMD Rule 445 was only applied in CalEEMod for the proposed Project.
3 The numbers may be slightly off due to rounding.
4 The net summer and winter emissions represent the net increase in operational air emissions compared to existing conditions (refer to Table 4.2-9).
5 Under 2019 Title 24 standards, nonresidential buildings will use about 30% less energy, mainly due to lighting upgrades, when compared to nonresidential buildings constructed under 2016 standards, and residential buildings will use about 53% less energy than those under the 2016 standards. (Source: California Energy Commission, 2019 Building Energy Efficiency Standards, https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf.)

Mobile Source Emissions

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, VOC, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and VOC react with sunlight to form O_3 [photochemical smog], and wind currents readily transport SO_X, PM_{10}, and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions have been estimated using EMFAC2017 and CalEEMod. Trip generation rates associated with the Project were based on the Transportation Assessment. According to the Transportation Assessment, the proposed Project would generate approximately 6,727 daily trips. Table 4.2-10 presents the anticipated net mobile source emissions. As seen in Table 4.2-10, emissions generated by vehicle traffic associated with the proposed Project would not exceed established SCAQMD regional thresholds.

Area Source Emissions

Area source emissions would be generated due to an increased demand for consumer products, architectural coating, and landscaping associated with the proposed Project. The proposed Project would not include wood burning fireplaces or other devices per SCAQMD Rule 445 (Wood Burning Devices). As shown in Table 4.2-10, area source emissions from the proposed Project would not exceed SCAQMD thresholds for VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$.

Energy Source Emissions

Energy source emissions would be generated as a result of electricity and natural gas (non-hearth) usage associated with the proposed Project. The primary use of electricity and natural gas by the Project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. As shown in Table 4.2-10, energy source emissions from the proposed Project would not exceed SCAQMD thresholds for VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$.

Overall Operational Emissions

As indicated in Table 4.2-10, net operational emissions from the proposed Project would not exceed SCAQMD thresholds. Thus, long-term operational air emissions impacts would not result in a cumulatively considerable net increase of any criteria pollutant and impacts would be **less than significant**.

Would the Project expose sensitive receptors to substantial pollutant concentrations?

Less-than-Significant Impact. Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The closest sensitive receptors are single-family and multifamily residential uses adjoining the Project site to the south and west. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction and operations impacts (area sources only). The CO hot spot analysis following the LST analysis addresses localized mobile source impacts.

Localized Significance Thresholds

LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I- 4). The SCAQMD provided the Final Localized Significance Threshold Methodology (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized air quality impacts. The SCAQMD provides the LST screening lookup tables for 1-, 2-, and 5-acre projects emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The Project is located within SRA 4, South Coastal Los Angeles County.

Short-Term Construction

The SCAQMD guidance on applying CalEEMod to LSTs specifies the number of acres a particular piece of equipment would likely disturb per day. SCAQMD provides LST thresholds for 1-, 2-, and 5-acre site disturbance areas; SCAQMD does not provide LST thresholds for projects over 5 acres. Based on information obtained from CalEEMod, the Project is anticipated to disturb up to 1,200 acres during the grading phase.[5] The grading phase would take approximately 240 days in total to complete. As such, the Project would actively disturb approximately 5 acres per day (240 days x 5 acres/day). Therefore, the LST thresholds for 5 acres were used for the construction LST analysis.

The closest sensitive receptors are residential uses adjoining the Project site to the south and west. These sensitive land uses may be potentially affected by air pollutant emissions generated during on-site construction activities. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. According

[5] Per the CalEEMod User's Guide, to properly grade a piece of land, multiple passes with grading equipment may be required; therefore, while the lot size is a fixed number of acres, the total acres graded could be an order of magnitude higher than the footprint of the lot (CAPCOA 2017). Accordingly, CalEEMod estimates the total acres graded during site preparation and grading phases based on the equipment list (including number of equipment), the number of days needed to complete the grading and/or site preparation phase, and the maximum number of acres a given piece of equipment can traverse in an 8-hour workday. Because the Project site is approximately 27.31 acres and was previously developed, the CalEEMod grading assumption is anticipated to be conservative.

to SCAQMD LST Methodology, projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters. As the nearest sensitive uses are adjoining the Project site to the south and west, the LST values for 25 meters (82 feet) were used.

Table 4.2-11, Localized Significance of Construction Emissions, shows the localized construction-related emissions for NO_X, CO, PM_{10}, and $PM_{2.5}$ compared to the LSTs for SRA 4. It is noted that the localized emissions presented in Table 4.2-11 are less than those in Table 4.2-8 because localized emissions include only on-site emissions (i.e., from construction equipment and fugitive dust), and do not include off-site emissions (i.e., from hauling activities). As previously discussed, the Project would implement PDF-AQ-1 to reduce PM_{10} construction emissions. PDF-AQ-1 would require that all diesel-fueled construction equipment greater than 50 horsepower meet EPA-certified Tier 4 Interim/Final emissions standards during all phases of construction. As shown in Table 4.2-11, localized construction emissions would not exceed the LSTs for SRA 4. Therefore, localized significance impacts from construction would be **less than significant**.

Table 4.2-11. Localized Significance of Construction Emissions (Maximum Pounds Per Day)

Construction Activity	Nitrogen Oxide (NO_X)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
2022	38.98	97.81	4.66	1.87
2023	40.25	100.86	4.64	1.86
2024	12.31	20.93	0.09	0.09
2025	14.39	24.59	0.09	0.09
2026	14.39	24.59	0.09	0.09
2027	14.39	24.59	0.09	0.09
Maximum On-Site Emissions	**40.25**	**100.86**	**4.66**	**1.87**
SCAQMD Localized Threshold	*123*	*1,530*	*14*	*8*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**

Source: Appendix B-1.
Notes: SCAQMD = South Coast Air Quality Management District.

1 The combined grading, building construction, and paving phases during Year 1 presents the worst-case scenario for NOx and CO, while the demolition and grading phases combined presents the worst-case scenario for $PM_{2.5}$ and PM_{10}.

2 The combined grading, building construction, and paving phases during Year 2 presents the worst-case scenario for NOx, CO, $PM_{2.5}$, and PM_{10}.

3 The building construction phase during Year 3 presents the worst-case scenario for NOx, CO, $PM_{2.5}$, and PM_{10}.

4 The combined building construction and architectural coating phases during Years 4 through 6 present the worst-case scenario for NOx, CO, $PM_{2.5}$, and PM_{10}.

5 The construction emissions incorporate the application of dust control techniques as required by SCAQMD Rule 403. The dust control techniques include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces twice daily; cover stock piles with tarps; water all haul roads three times daily; and limit speeds on unpaved roads to 15 miles per hour.

6 Project emissions include implementation of PDF-AQ-1. PDF-AQ-1 would require that all diesel-fueled construction equipment greater than 50 horsepower meet EPA-certified Tier 4 Interim/Final emissions standards during all phases of construction. The Project emissions results in this table represent the "mitigated" emissions shown in the CalEEMod output sheets in Appendix B-1.

7 The Localized Significance Threshold was determined using Appendix C of the SCAQMD Final Localized Significant Threshold Methodology guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction (approximately 5 acres), a distance of 82-feet (25) meters to the closest sensitive receptor, and the source receptor area (SRA 4).

Long-Term Operations

According to SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed Project if the Project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). Thus, due to the lack of such stationary sources or uses, no long-term LST analysis is necessary. Operational LST impacts would be **less than significant** in this regard.

Carbon Monoxide Hot Spots

An analysis of CO "hot spots" is needed to determine whether the change in the level of service of an intersection as a result of the proposed Project would have the potential to result in exceedances of the CAAQS or NAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan (SCAQMD 2003). The 2003 AQMP is the most recent AQMP that addresses CO concentrations. It should be noted that the Basin was redesignated as attainment/maintenance in 2007 and is no longer addressed in the SCAQMD's subsequent AQMPs. As part of the 2003 AQMP CO hot-spot analysis, the Wilshire Boulevard/Veteran Avenue intersection in Los Angeles, one of the most congested intersections in Southern California with an average daily traffic volume of approximately 100,000 vehicles per day, was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 ppm, which is well below the 35 ppm federal standard.

As the CO hot spots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection, even with 100,000 vehicles daily, it can be reasonably inferred that CO hot spots would not be experienced at any vicinity intersections as a result of vehicle trips added by this Project. According to the Transportation Assessment, the proposed Project would generate 6,727 daily trips with 476 a.m. peak hour trips and 544 p.m. peak hour trips. Therefore, impacts would be less than significant in this regard. Therefore, CO hot spot impacts would be **less than significant** in this regard.

Air Quality Health Impacts

Criteria Pollutants

Adverse health effects induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individual [e.g., age and gender]). In particular, O_3 precursors, VOCs and NO_X, affect air quality on a regional scale. Health effects related to O_3 are therefore the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations, and, as such, translating Project-generated criteria pollutants to specific health effects or additional days of nonattainment would produce meaningless results. In other words, the Project's less than significant increases in regional air pollution from criteria air pollutants would have nominal or negligible impacts on human health.

As noted in the Brief of Amicus Curiae by the SCAQMD (April 6, 2015) submitted in *Sierra Club vs. County of Fresno* (2018) 6 Cal. 5th 502, the SCAQMD acknowledged it would be extremely difficult, if not impossible, to quantify health impacts of criteria pollutants for various reasons including modeling limitations as well as where in the atmosphere air pollutants interact and form. Further, as noted in the Brief of Amicus Curiae by the San Joaquin Valley Air Pollution Control District (April 13, 2015) also submitted in *Sierra Club vs. County of Fresno*, San Joaquin Valley Air Pollution Control District acknowledged that currently available modeling tools are not equipped to provide a meaningful analysis of the correlation between an individual development project's air emissions and specific human health impacts.

The SCAQMD acknowledges that health effects quantification from O_3, as an example is correlated with the increases in ambient level of O_3 in the air (concentration) that an individual person breathes. SCAQMD's Brief of Amicus Curiae states that it would take a large amount of additional emissions to cause a modeled increase in ambient O_3 levels over the entire region. The SCAQMD states that based on their own modeling in the SCAQMD's 2012 Air Quality Management Plan, a reduction of 432 tons (864,000 pounds) per day of NO_X and a reduction of 187 tons (374,000 pounds) per day of VOCs would reduce O_3 levels at highest monitored site by only nine parts per billion. As such, the SCAQMD concludes that it is not currently possible to accurately quantify O_3-related health impacts caused by NO_X or VOC emissions from relatively small projects (defined as projects with regional scope) due to photochemistry and regional model limitations. Thus, as the Project would not exceed SCAQMD thresholds for construction and operational air emissions, the Project would have a **less than significant impact** for air quality health impacts.

Toxic Air Contaminants

Construction Health Risk Assessment

As previously discussed, Project construction is anticipated to be completed over a period of up to approximately 60 months. Project construction activities are anticipated to involve the operation of diesel-powered equipment, which would emit DPM. In 1998, the CARB identified diesel exhaust as a TAC. Cancer health risks associated with exposures to diesel exhaust typically are associated with chronic exposure, in which a 30-year exposure period often is assumed. Project construction would comply with the California Code of Regulations (CCR), Title 13, Section 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to nor more than 5 minutes. In addition, the Project would implement PDF-AQ-1 that would significantly reduce DPM construction exhaust emissions. Furthermore, construction activities are expected to occur well below the 30-year exposure period used in health risk assessments (over a period of 60 months).

A construction health risk assessment (Appendix B-2) was prepared to assess the health risk impacts from exposure to TAC emissions generated from construction activities. The health risk assessment quantifies both carcinogenic risks and noncarcinogenic hazards for the maximum exposed residential receptor adjoining the Project site. For on-site construction, off-road PM_{10} exhaust emission estimates were used as a surrogate for DPM emissions.

The air dispersion modeling for the risk assessment was performed using the EPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in this case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Surface and upper air meteorological data was obtained from CARB. Surface and upper air meteorological data from the Long Beach Airport Monitoring Station was selected as being the most representative for meteorology based on proximity to the Project site.

The model scalar value of 1 was assigned to account for emissions generated during construction related activity corresponding to 8 hours per day as reported in the CalEEMod construction profile from 8 a.m. to 4 p.m. (ending hours 9 to 16). A scalar value of 0 was used for non-operational hours. Residential receptors were placed immediately west and south of the Project site and assigned flagpole heights of two meters.

To effectively quantify dose, the procedure requires the incorporation of several discrete exposure variates. To account for upper-bound exposures associated with residential occupancies, lifetime risk values were adjusted to account for an exposure frequency of 350 days per year for a period of 3.56 years (i.e., 0.25 years for the third trimester, 2.0 years for ages 0 to 2 years and 1.31 years for the 2 to 9 year age group).

An evaluation of the potential noncancer effects of DPM exposure was also conducted. Under the point estimate approach, adverse health effects are evaluated by comparing the pollutant concentration with the appropriate Reference Exposure Level. The Reference Exposure Level presented in the Consolidated Table of OEHHA/CARB Approved Risk Assessment Health Values was considered in the assessment.

To quantify noncarcinogenic impacts, the hazard index approach was used. The hazard index assumes that subthreshold exposures adversely affect a specific organ or organ system (i.e., toxicological endpoint). To calculate the hazard index, the pollutant concentration or dose is divided by its toxicity value. Should the total equal or exceed one (i.e., unity), a health hazard is presumed to exist. No exposure frequency or duration adjustments are considered for noncarcinogenic exposures.

The cancer risk at the maximum exposed residential receptor is 0.4 in 1 million, which is below the SCAQMD significance threshold of 10 in 1 million. The highest maximum chronic hazard index at the maximum exposed residential receptor is 0.006, which is below the SCAQMD's threshold of 1.0. Therefore, Project construction is not anticipated to result in an elevated health risk to nearby sensitive receptors and potential impacts would be **less than significant**.

Conclusion

In conclusion, the Project would not expose sensitive receptors to substantial pollutant concentrations as the Project would not exceed the SCAQMD LST thresholds, would not cause a CO hot spot, and would not create a localized air quality health impact. Therefore, impacts would be **less than significant**.

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

Less-than-Significant Impact. According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed Project would not include any of the land uses that have been identified by the SCAQMD as odor sources.

Construction activities associated with the Project may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. However, construction-related odors would be short-term in nature and cease upon Project completion. In addition, the Project would be required to comply with the California Code of Regulations, Title 13, sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than 5 minutes. This would further reduce the detectable odors from heavy-duty equipment exhaust. The Project would also comply with the SCAQMD Regulation XI, Rule 1113 – Architectural Coating, which would minimize odor impacts from ROG emissions during architectural coating (SCAQMD 2016b). Any impacts to existing adjacent land uses would be short-term and are **less than significant**.

Would the Project have cumulatively considerable impacts with regards to air quality?

Less-than-Significant Impact. Because of the cumulative nature of air quality impacts, cumulative impacts to air quality are addressed in Section 4.2.4, under impact threshold AQ-2, and cumulative air quality impacts would be **less than significant**.

4.2.5 Mitigation Measures

The proposed Project would not result in significant impacts; therefore, no mitigation is required.

4.2.6 Level of Significance After Mitigation

All impacts were determined to be **less than significant**. No mitigation is required.

4.2.7 References

CAPCOA (California Air Pollution Control Officers Association). 2017. *California Emissions Estimator Model (CalEEMod) User's Guide Version 2016.3.2.* Prepared by Trinity Consultants and the California Air Districts. November 2017. http://www.caleemod.com/.

CAPCOA . 2018. Health Effects. Accessed June 2021. capcoa.org/health-effects/.

CARB (California Air Resources Board). 2016. "Ambient Air Quality Standards." May 6, 2016. Accessed June 2021. https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf?_ga=2.189316907.1613509176.1580753678-18802336.1523461825.

CARB. 2018. "Aerometric Data Analysis and Measurement System (ADAM) Top Four Summaries from 2015 to 2017." Accessed June 2021. https://www.arb.ca.gov/adam/topfour/topfour1.php.

EPA (U.S. Environmental Protection Agency). 2018. "Nonattainment Areas for Criteria Pollutants (Green Book)." September 4, 2018. Accessed June 2021. https://www.epa.gov/green-book.

EPA. 2021. Carbon Monoxide Emissions. Accessed June 29, 2021. https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=10.

ICCT (International Council on Clean Transportation). 2021, "US: Nonroad: Emissions." Accessed February 22, 2021.https://www.transportpolicy.net/standard/us-nonroad-emissions.

OFR (National Archives and Records Administration's Office of the Federal Register, Electronic Code of Federal Regulations). 2021. *Title 40: Protection of Environment Part 1039 – Control of emissions from new and in-use nonroad compression-ignition engine*s, Last updated August 19, 2021. Accessed February 22, 2021. https://www.ecfr.gov/cgi-bin/text-idx?SID=94ae9cf9f8cb63bc378d54fc4f8ddff6&mc=true&node=pt40.36.1039&rgn=div5.

SCAG (Southern California Association of Governments). 2019. Local Profiles Report 2019. Profile of the City of Carson. May 2019. Accessed January 20, 2021. https://scag.ca.gov/sites/main/files/file-attachments/carson_localprofile.pdf?1605664037.

SCAQMD (South Coast Air Quality Management District). 1993. CEQA Air Quality Handbook, 1993.

SCAQMD. 2009. *Localized Significance Threshold Methodology*, 2008. Accessed June 2021. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2.

SCAQMD. 2016a. *Air Quality Management Plan*. Accessed June 2021. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15.

SCAQMD. 2016b. *Regulation XI Source Specific Standards*, Amended February 5, 2016. Accessed June 29, 2021.http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf?sfvrsn=15.

SCAQMD. 2019. CEQA Air Quality Significance Thresholds. April 2019. Accessed June 2021. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

Sullivan, J.L., Baker, R.E., Boyer, B.A., Hammerle, R.H., Kenney, T.E., Muniz, L., Wallington, T.J., 2004. *CO_2 Emission Benefit of Diesel (versus Gasoline) Powered Vehicles*. Published on web March 13, 2004, Accessed February 22, 2021. https://pubs.acs.org/doi/pdf/10.1021/es034928d.

4.3 Cultural Resources and Tribal Cultural Resources

This section describes the existing historical resources, archaeological resources, human remains, and tribal cultural resources (TCRs) conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project).

Information contained in this section is based a Historical Resource Assessment for 21207 Avalon Boulevard, Carson prepared by Architectural Resources Group dated December 18, 2020 (Appendix C-1) and a Cultural Resources Evaluation Letter Report for the 21207 Avalon Boulevard Project by ASM Affiliates, dated December 18, 2020 (Appendix C-2).

Other sources consulted are listed in Section 4.3.7, References.

4.3.1 Existing Conditions

Project Area Overview

The following overview of the historical setting of the Project site and greater Project area is summarized from the Historical Resource Assessment (Appendix C-1).

The Project site was originally in the middle of a prehistoric slough[1] that existed until about the 1930s. The slough and nearby area were occupied by the Gabrielino/Tongva people before Spanish colonization of the area in the 18th century (Figure 4.3-1, Historical Images of the Project Site).

Prior to the Spanish colonization of California in the 18th century, the area that would later become Carson was inhabited by the Tongva, a Native American tribe that occupied much of what is now Los Angeles County, half of Orange County, and the islands of San Clemente, San Nicolas, and Santa Catalina. The Tongva had frequent interactions with the groups bordering their territory, including the Chumash to the north, the Serrano to the east, and the Luiseño and Juaneño to the south. The group is commonly referred to as the Gabrielino as well as the Tongva. The name Gabrielino originally referred specifically to the people affiliated with Mission San Gabriel Arcangel. Today, the name refers to other adjacent groups as well, some of whom prefer the name Tongva, others of whom prefer the name Kizh.

The Gabrielino/Tongva/Kizh used both inland and coastal food resources, living a semi-sedentary lifestyle that relied on seasonally available foods and establishing large, permanent villages near stable water sources. Temporary campsites were used seasonally for gathering plant foods like acorns, as well as for fishing, harvesting shellfish, and hunting. The village of *Suangna* was sited in the Carson area and remained an active Tongva community into the historic period. *Suangna* was included in the first Spanish land grant in California, the 75,000-acre Rancho San Pedro, given to Juan Dominguez in 1782 and thereafter commonly known as the Dominguez Rancho. This rancho encompassed most of today's South Bay region, stretching from the Los Angeles River west to the ocean. The City of Carson later took its name from a member of the Dominguez family—Juan Dominguez's great-grandson, George Henry Carson.

[1] Slough: A slough is a wetland which is characterized by slow-moving or stagnant water on a seasonal basis. The term slough is used to describe wetlands like shallow lakes and swamps (World Atlas 2018).

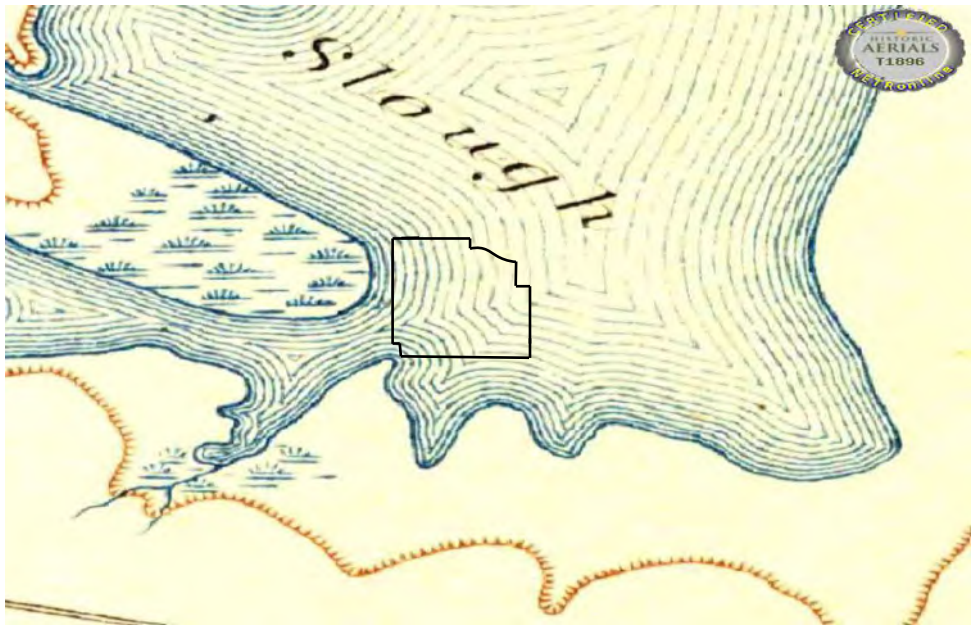
After decades of ranching, the Dominguez family found additional profits in the late 1800s by selling off portions of its land. While other Los Angeles County rancho land filled with residential subdivisions at this time, the Dominguez land primarily saw the development of small farms, commerce, and low-scale industrial operations. In the early 1920s, a more lucrative pursuit presented itself with the discovery of oil in several major oil fields on Rancho Dominguez lands. This transformed much of the South Bay, and the area that would become Carson was no exception. By 1926, the area contained five major oil refineries, making it the largest refinery complex in the nation at that time. This heavy industrial use left little room for other types of development, as stated in a 1935 analysis prepared for the land company that owned most of the Carson area: "The oil refining and processing industry is not conducive to making property in the vicinity attractive to any other type of industry for subdivision and living conditions." A few people settled around the refineries where they worked, and the area was served by a Pacific Electric Railway line (originally a 1903 Los Angeles Interurban Railway line). On the whole, the locale was industrial and most workers lived in more established neighboring communities like Torrance, Gardena, Lomita, Harbor City, and Compton. Some commuted to Carson on the Pacific Electric. The railway used "Carson" as the name for its local stop between Gardena and San Pedro, likely leading the community to adopt the name Carson as a whole.

Housing trailers became popular during the Great Depression among displaced people, with the greatest demand following World War II. Like the rest of the South Bay, the Carson area experienced rapid growth following World War II, and trailer parks became crucial housing for working-class residents. The prominence of trailer parks and mobile home parks from the 1940s through the 1970s is illustrated by the many examples still extant in Carson today; Carson contains at least 21 mobile home parks, of which 18 predate Imperial Avalon Mobile Estates (Mobile Home Park).

The parcel that now contains the Project site appears to have been used as agricultural land prior to the early 1970s, with fields, farmhouses, and outbuildings visible on aerial photographs from 1952 and 1963. In 1972, America's Beautiful Cities (ABC) Corp. of San Pedro began grading and filling on the 27-acre parcel, working for Los Angeles developer Sei Dyo to lay the groundwork for a 229-unit mobile home park. ABC trucked in tons of fill from excavation sites and used large, recycled pieces of concrete from highway improvement projects to form the gravel base for the Mobile Home Park's internal road network. During the prolonged grading and filling process, ABC landscaped the property boundary along Avalon Boulevard to improve appearances.

As shown by the many original units remaining in the Mobile Home Park, the typical home was one story in height, with synthetic, engineered wood, stucco, or aluminum cladding that was often designed to look like clapboard or board-and-batten siding. Accent cladding including cut stone and brick, and aluminum sliding windows (often shaded by an aluminum awning) were the most common type. A shallowly pitched gable roof, usually covered with composition shingle or aluminum, connected to canopies on either side of the house to shelter a full- or partial-width porch fronting the primary entrance on one side, and a driveway and rear entrance on the other. These canopies were usually supported by decorative metal supports. Representative photos are shown in Figure 4.3-2, Existing Conditions. Mobile home manufacturers represented at Imperial Avalon included Gold Medal, Homette, Jefferson, Silverwood, and among others.

Imperial Avalon Mobile Estates has been fully developed and continuously occupied since its completion in 1975. There have been multiple alterations and improvements to most of the individual units since the Mobile Home Park opened, and many of the original mobile homes have been replaced by larger manufactured homes. Landscaping in common areas has changed, with xeriscaping at the Mobile Home Park entrance and the addition of several pet-relief stations with benches, artificial grass, and waste bag dispensers. The Mobile Home Park's overall layout, including internal roads, appears to have remained the same since its establishment



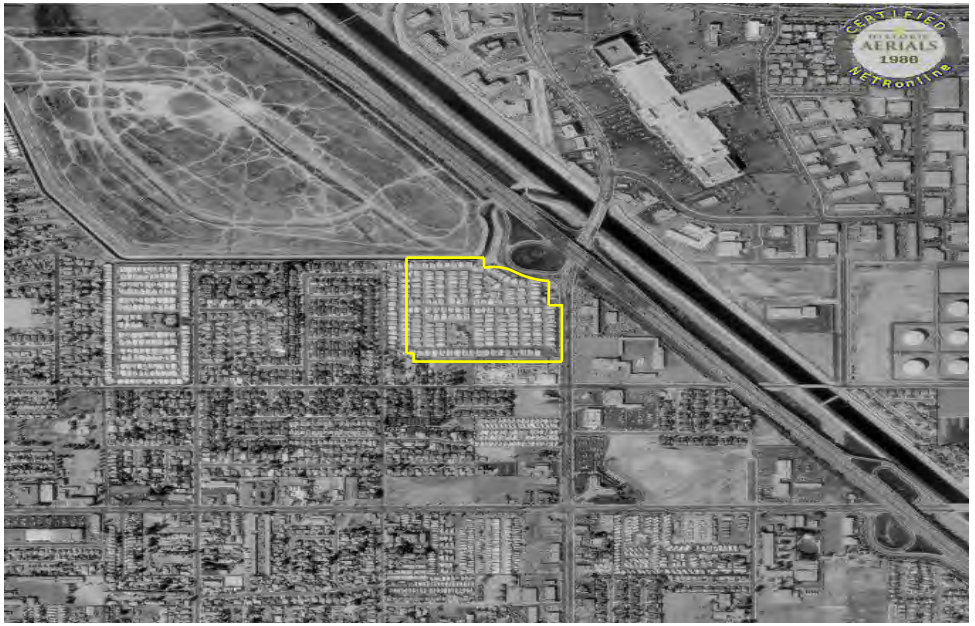
1896 Topographic Map



1938 Aerial



1963 Aerial



1980 Aerial

Path: \\dudek.int\dat\GIS\Data\Projects\10029011\MAPDOC\DOCUMENT\EIR

DUDEK

FIGURE 4.3-1

Historical Images of the Project Site

Imperial Avalon Mixed-Use Project

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Overview of entry from Avalon Blvd., view northwest



Sign and landscaping at north side of entry, view north



Community building south façade, view north



Typical streetscape with individual units

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DUDEK

FIGURE 4.3-2

Existing Conditions

Imperial Avalon Mixed-Use Project

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Background Research

This section documents the results of the following:

- A California Historical Resources Information System (CHRIS) records search conducted at the South Central Coastal Information Center (SCCIC)
- A search of the California Native American Heritage Commission's (NAHC) Sacred Lands File (SLF)
- An archaeological field survey of accessible portions of the Project area
- A review of historical maps and aerial imagery of the site and surroundings
- A search in California's Historic Resources Inventory; a review of state and local technical bulletins, ordinances, and other materials related to the evaluation of historical resource
- Consultation with the City of Carson (City) Building and Safety Department and the State of California Department of Housing and Community Development for historic building permits
- A review of primary and secondary source research related to the history of the Project site
- The results of informal tribal consultation, and formal tribal consultation completed by the lead agency, the City, pursuant to California Assembly Bill (AB) 52 and Senate Bill (SB) 18

California Historical Resources Information System Records Search

On September 9, 2019, ASM Affiliates completed a CHRIS records search at the SCCIC for a 1-mile radius around the Project site. This search included all records and documents on file with the SCCIC, as well as the Office of Historic Preservation Historic Properties Directory. The records search results are included in the confidential appendix of Appendix C-2.

SCCIC records identified 19 previously conducted cultural resources technical investigations within 1 mile of the Project site, one of which encompassed the Project area: an extensive cultural resources inventory of the City of Carson, conducted for the Carson Community Planning Department in 1977. Two additional reports related to the Project area were located online, including an Archeological Survey Report prepared for the Caltrans-proposed Interstate (I) 405/Avalon Boulevard Interchange Improvements in 2007, and an environmental impact report prepared for the Boulevards at South Bay development project in 2006.

The records search identified four previously documented resources within the 1-mile records search radius, none of which are located within the Project area. Two of these resources are considered prehistoric, and two are considered historic. The two prehistoric sites identified by the records search consist of lithic scatters and habitation debris. CA-LAN-106 was recorded in 1939, situated approximately 0.85 miles southwest of the Project area. CA-LAN-795 was recorded in 1977 approximately 1 mile south-southeast of the Project area.

In addition, ASM Affiliates conducted a reconnaissance-level pedestrian survey of the Project site on September 30, 2019. No cultural resources were identified within the Project site as a result of the survey.

Historic Aerial Review

ASM Affiliates consulted historic maps and aerial photographs to understand development of the Project site and surrounding vicinity. Topographic maps were available from the following years: 1896, 1899, 1905, 1910, 1916, 1922, 1924, 1926, 1927, 1930, 1939, 1953, 1959, 1966, 1975, 1982, 2012, and 2015. Historic aerial images were available from the following years: 1952, 1963, 1972, 1980, 1994, 2002, 2003, 2004, 2005, 2009, 2010, 2012, 2014, and 2016 (Appendix C-2).

The topographic maps show that the Project site was originally fully engulfed within a large slough. Reclamation of the land appears to have taken place sometime prior to 1930, when some roads appear, including Avalon Boulevard on the east and Grace Avenue on the west, and a channelized slough appears to the northeast of the Project site. The 1927 topographic map shows the slough in its original configuration; however, it seems likely that reclamation of the land would have begun earlier than that in order for the amount of infrastructure visible on the 1930 map to have been created. The 1939 map shows a smattering of structures within the Project site with several more appearing on the 1953 and 1959 maps. Fewer structures appear on the 1966 and 1975 topographic maps, while the 1982 map labels the area "Trailer Park" and shows all of its internal roads. The I-405 freeway first appears on the 1966 map.

Historical aerials from 1952 appears to show at least some of the Project area being used for agricultural purposes. The 1972 image shows the Project area having undergone significant modification, with the eastern portion appearing to have been graded and the western portion appearing to consist of dirt hills cut with roads in preparation for the mobile home park development. The 1980 image shows a fully developed mobile home park within the Project site, and no significant changes to this condition within the site appear up to present day.

Native American Coordination

Sacred Lands File Search and Tribal Outreach

ASM Affiliates contacted the NAHC on September 4, 2019, requesting a review of the SLF for the Project site. In a response letter received on September 23, 2019, the NAHC stated that the results of the SLF search were negative for known cultural resources. The NAHC also provided a list of five Native American groups and/or individuals who may have interest in the Project area or may have knowledge of cultural resources in the Project site. Letters were sent via certified mail to each representative on December 30, 2019. To date, no response has been received from the five Native American groups. This outreach was conducted for informational purposes only and did not constitute formal government-to-government consultation as specified by AB 52 or SB 18. Table 4.3-1 summarizes the results of the Native American coordination efforts.

Table 4.3-1. Native American Heritage Commission–Listed Native American Contacts

Native American Tribal Representatives	Method of Notification/Date	Response Received
Andrew Salas, Chairperson Gabrieleño Band of Mission Indians – Kizh Nation	Certified mail sent December 30, 2019	Mitigation Measures requested via email on April 20, 2020
Anthony Morales, Chairperson Gabrieleño/Tongva San Gabriel Band of Mission Indians	Certified mail sent December 30, 2019	None to date
Sandonne Goad, Chairperson Gabrieleño/Tongva Indians of California Tribal Council	Certified mail sent December 30, 2019	None to date
Robert F. Dorame, Chairman Gabrieleño Tongva Indians of California Tribal Council	Certified mail sent December 30, 2019	None to date
Charles Alvarez, Councilmember Gabrieleño-Tongva Tribe	Certified mail sent December 30, 2019	None to date

Assembly Bill 52

A project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (PRC Section 21084.2). Under AB 52, a TCR must have tangible, geographically defined properties that can be impacted by project implementation. The Project is subject to compliance with AB 52.

On December 31, 2019, the City sent notification of the Project to all California Native American tribal representatives that have requested project notifications from the City pursuant to AB 52 and that are on file with the NAHC as being traditionally or culturally affiliated with the geographic area. These notification letters included a project map and description inquiring if the tribe would like to consult to discuss the Project and the potential to impact any TCRs. AB 52 allows tribes 30 days after receiving notification to request consultation. If a response is not received within the allotted 30 days, it is assumed that consultation is declined. To date, one response was received as a result of the City's AB 52 consultation notification. Table 4.3-2 summarizes the results of the AB 52 process for the Project, followed by a summary of the consultation results to date. The confidential AB 52 consultation results are on file with the City.

Table 4.3-2. Assembly Bill 52 Native American Tribal Outreach Results

Native American Tribal Representatives	Method and Date of Notification	Response to City Notification Letters	Consultation Date
Anthony Morales, Chairperson Gabrieleño/Tongva San Gabriel Band of Mission Indians	Letter mailed December 31, 2019	No Response	As no response was received, consultation was concluded.
Sadonne Goad, Chairperson Gabrielino/Tongva Nation	Letter mailed December 31, 2019	No Response	As no response was received, consultation was concluded.
Andrew Salas, Chairperson Gabrieleño Band of Mission Indians – Kizh Nation	Letter mailed December 31, 2019	Request for consultation.	Consultation was conducted on March 19, 2020.
Charles Alvarez, Councilmember Gabrielino-Tongva Tribe	Letter mailed December 31, 2019	No Response	As no response was received, consultation was concluded.
Robert Dorame, Chairperson Gabrielino Tongva Indians of California Tribal Council	Letter mailed December 31, 2019	No Response	As no response was received, consultation was concluded.

On January 3, 2020, the Gabrieleño Band of Mission Indians–Kizh Nation contacted the City requesting consultation. Consultation was initiated by the City with the Gabrieleño Band of Mission Indians–Kizh Nation on March 19, 2020. During that consultation, the Gabrieleño Band of Mission Indians–Kizh Nation provided the City with maps noting that a village site was located in the vicinity of the Project site. Additionally, on April 20, 2020, the Gabrieleño Band of Mission Indians–Kizh Nation provided recommended mitigation measures and conditions of approval for the Project, which the City has agreed to implement (see Mitigation Measure [MM-]TCR-1 below), and thus concluded consultation.

To date, no responses have been received from other tribal contacts regarding TCRs or other concerns about the Project. Based on the lack of responses, government-to-government consultation initiated by the City, acting in good faith and after a reasonable effort, has not resulted in the identification of a TCR within or near the Project site.

Senate Bill 18

According to SB 18, the City has a responsibility to initiate consultation with tribes/groups listed on the California NAHC's official SB 18 contact list for amendment of a General Plan. SB 18 requires the City to send a letter to each contact on the NAHC's SB 18 list, extending an invitation for consultation. Tribes will have 90 days from receipt of the letter to request consultation. The City must also send a notice to all contacts 45 days prior to adopting the amended General Plan, as well as a third notice 10 days prior to any public hearing regarding the General Plan amendment.

The City sent the request to the NAHC on October 15, 2019, and then received a list of tribes from the NAHC on October 25, 2019. The City sent notification of the Project to all California Native American tribal representatives that have requested notifications pursuant to SB 18 and that are on file with the NAHC as being traditionally or culturally affiliated with the geographic area on December 31, 2019. These notification letters included a Project map and description inquiring if the tribe would like to consult on the Project. To date, government-to-government consultation initiated by the City has not resulted in the identification of a TCR within or near the Project site. Table 4.3-3 summarizes the results of the SB 18 process for the Project. The confidential SB 18 consultation results are on file with the City.

Table 4.3-3. Senate Bill 18 Native American Tribal Outreach Results

Native American Tribal Representatives	Method and Date of Notification	Response to City Notification Letters	Consultation Date
Anthony Morales, Chairperson Gabrieleño/Tongva San Gabriel Band of Mission Indians	Letter mailed December 31, 2019	No Response	As no response was received, consultation was concluded.
Sadonne Goad, Chairperson Gabrielino/Tongva Nation	Letter mailed December 31, 2019	No Response	As no response was received, consultation was concluded.
Andrew Salas, Chairperson Gabrieleño Band of Mission Indians – Kizh Nation	Letter mailed December 31, 2019	Request for consultation.	Consultation was conducted on March 19, 2020.
Charles Alvarez, Councilmember Gabrielino-Tongva Tribe	Letter mailed December 31, 2019	No Response	As no response was received, consultation was concluded.
Robert Dorame, Chairperson Gabrielino Tongva Indians of California Tribal Council	Letter mailed December 31, 2019	No Response	As no response was received, consultation was concluded.

4.3.2 Relevant Plans, Policies, and Ordinances

Federal

National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation's master inventory of known historic resources. Created under the auspices of the National Historic Preservation Act of 1966, the NRHP is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. As described in National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation, in order to be eligible for the National Register, a resource must both (1) be significant and (2) retain sufficient integrity to convey its significance.

Significance is assessed by evaluating a resource against established criteria for eligibility. A resource is considered significant if it satisfies any one of the following four NRHP criteria:

A. Associated with events that have made a significant contribution to the broad patterns of our history;
B. Associated with the lives of significant persons in our past;
C. Embodies the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction;
D. Has yielded, or may be likely to yield, information important in prehistory or history.

Once significance has been established, it must then be demonstrated that a resource retains enough of its physical and associative qualities, or integrity, to convey the reason(s) for its significance. Integrity is best described as a resource's "authenticity" as expressed through its physical features and extant characteristics. Whether a resource retains sufficient integrity for listing is determined by evaluating the seven aspects of integrity defined by the National Park Service:

1. Location (the place where the historic property was constructed or the place where the historic event occurred);
2. Setting (the physical environment of a historic property);
3. Design (the combination of elements that create the form, plan, space, structure, and style of a property);
4. Materials (the physical elements that were combined or deposited during a particular period of time and in a particular manner or configuration to form a historic property);
5. Workmanship (the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory);
6. Feeling (a property's expression of the aesthetic or historic sense of a particular period of time); and
7. Association (the direct link between an important historic event/person and a historic property).

Integrity is evaluated by weighing all seven of these aspects together and is ultimately a "yes or no" determination. Some aspects of integrity may be weighed more heavily than others depending on the type of resource being evaluated and the reason(s) for its significance. Since integrity depends on a resource's placement within a historic context, integrity can be assessed only after it has been established that the resource is significant, and under which criteria.

Generally, a resource must be at least 50 years of age to be eligible for listing in the NRHP. Exceptions are made if it can be demonstrated that a resource less than 50 years old is (1) of exceptional importance or (2) is an integral component of a historic district that is eligible for the NRHP.

State

The following state regulations pertaining to cultural resources would apply to the Project.

California Register of Historical Resources

In California, the term "historical resource" includes, but is not limited to, "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC Section 5020.1[j]). In 1992, the California legislature established the California Register of Historical Resources (CRHR) "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1[a]). The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, enumerated as follows. According to California Public Resources Code (PRC) Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity" and (ii) meets at least one of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Is associated with the lives of persons important in our past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history.

To understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (14 CCR 4852[d][2]).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Environmental Quality Act

Cultural Resources

The following California Environmental Quality Act (CEQA) statutes (PRC Section 21000 et seq.) and CEQA Guidelines (14 CCR 15000 et seq.) are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- PRC Section 21083.2(g) defines "unique archaeological resource."
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) defines "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of a historical resource;" it also defines the circumstances when a project would materially impair the significance of a historical resource.
- PRC Section 21074(a) defines "tribal cultural resources."
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- PRC Sections 21083.2(b) and 21083.2(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures. Preservation in place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context and may help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; 14 CCR 15064.5[b]).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired" (14 CCR 15064.5[b][1]; PRC Section 5020.1[q]). In turn, the significance of a historical resource is materially impaired when a project does any of the following (14 CCR 15064.5[b][2]):

1. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any historical resources, then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance would be materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.2[a]–[c]).

Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria (PRC Section 21083.2[g]):

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts on non-unique archaeological resources are generally not considered a significant environmental impact (PRC Section 21083.2[a]; 14 CCR 15064.5[c][4]). However, if a non-unique archaeological resource qualifies as a TCR (PRC Sections 21074[c] and 21083.2[h]), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed in PRC Section 5097.98.

California State Assembly Bill 52

AB 52 of 2014 amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 established that TCRs must be considered under CEQA and provided for additional Native American consultation requirements for the lead agency. Section 21074 describes a TCR as a site, feature, place, cultural landscape, sacred place, or object that is considered of cultural value to a California Native American tribe and that is either:

- On or determined to be eligible for the California Register of Historical Resources or a local historic register; or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1.

AB 52 formalizes the lead agency–tribal consultation process, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with a project site, including tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report.

Section 1 (a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment." Effects on TCRs should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid

significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to TCRs, the consultation shall include those topics (PRC Section 21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3[a]).

Senate Bill 18

The Local and Tribal Intergovernmental Consultation process, commonly known as SB 18, was signed into law September of 2004 and took effect March 1, 2005. SB 18 refers to PRC Section 5097.9 and 5097.995, which defines cultural places as:

- Native American sanctified cemetery place of worship, religious or ceremonial site, or sacred shrine (PRC Section 5097.9).
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historic Resources pursuant to Section 5024.1, including any historic or prehistoric ruins, any burial ground, any archaeological or historic site (PRC Section 5097.993).

SB 18 established responsibilities for local governments to contact, provide notice to, refer plans to, and consult with California Native American tribes that have been identified by the NAHC and if that tribe requests consultation after local government outreach as stipulated in Government Code Section 65352.3. The purpose of this consultation process is to protect the identity of the cultural place and to develop appropriate and dignified treatment of the cultural place in any subsequent project. The consultation is required whenever a general plan, specific plan, or open space designation is proposed for adoption or to be amended. Once local governments have sent notification, tribes are responsible for requesting consultation. Pursuant to Government Code Section 65352.3(a)(2), each tribe has 90 days from the date on which they receive notification to respond and request consultation.

In addition to the requirements stipulated previously, SB 18 amended Government Code Section 65560 to "allow the protection of cultural places in open space element of the general plan" and amended Civil Code Section 815.3 to add "California Native American tribes to the list of entities that can acquire and hold conservation easements for the purpose of protecting their cultural places."

California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the county coroner has examined the remains (Health and Safety Code Section 7050.5[b]). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the county coroner determines or has reason to believe the remains are those of a Native American, the county coroner must contact the NAHC within 24 hours (Health and Safety Code Section 7050.5[c]). The NAHC will notify the most likely descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Local

The following local/regional regulations pertaining to cultural resources would apply to the Project.

City of Carson General Plan (2004)

The City General Plan, updated in 2004, provides a framework for all zoning and land use decisions within the City. Under the City's General Plan for the Protection of Historical Resources, the City has policies, which may be applicable to the Project, including the following:

Goal P-8 Protection of historic resources within the City.

Policy P-9.1 Promote the preservation of historic resources in the City through the Fine Arts and Historical Commission.

Policy P-9.2 Coordinate with the Departments of History and Anthropology at Cal State University Dominguez Hills in order to mutually enrich both the educational and general communities.

Policy P-9.3 Create an oral history program that would archive the City's history from long time Carson residents.

Implementation Measure P-IM-9.1 Encourage the Fine Arts and Historical Commission to work with local historic societies and CSUDH to preserve important historic resources. To this end, work with the City's Public Information Office to promote local and regional historic resources. (Implements P-9.1, P-9.2 and P-9.3)

Implementation Measure P-IM-9.2 Encourage all development or redevelopment occurring in areas identified as a potential historic archaeological site to be surveyed for historic archaeological resources prior to initiation of site preparation for development. (Implements P-9.1)

Implementation Measure P-IM-9.3 Ensure that documentation of all historic archaeological surveys conducted in the City of Carson be provided to the Planning and Environmental Services Division. (Implements P-9.1)

4.3.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources would occur if the Project would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
3. Disturb any human remains, including those interred outside of dedicated cemeteries.

The significance criteria used to evaluate the Project impacts to TCRs are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to TCRs would occur if the Project would:

1. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).
    b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Additionally, a significant impact would occur if the Project would:

2. Result in a cumulatively considerable impact to cultural or tribal cultural resources.

4.3.4 Impacts Analysis

Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Less-than-Significant Impact. As detailed in the Historical Resources Assessment (Appendix C-1), Cultural Resources Evaluation Letter Report (Appendix C-2), and as summarized below, there are no historical resources on the Project site and the Project would not cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

As part of the Cultural Resources Evaluation Letter Report (Appendix C-2) prepared for the Project, a records search of the CHRIS at the SCCIC was completed on September 9, 2019. The CHRIS search included a review of mapped prehistoric, historical, and built-environment resources. In addition, an intensive survey of the Project site was conducted on August 28, 2019. No historical resources were identified within the Project site or immediate vicinity as a result of the CHRIS records search or intensive survey. The site was reclaimed in 1972 using recycled materials to fill and level the site and develop road bases for the Mobile Home Park. Fill dirt was trucked in from excavation sites and large chunks of concrete from highway improvements and similar projects were brought to the site to be crushed into cement gravel to create the road bases. These materials are considered waste products that have been highly processed and do not have any historical significance. Moreover, as part of the Historic Resources Assessment (Appendix C-1), the Mobile Home Park was recorded and evaluated in consideration of NRHP and CRHR designation criteria and integrity requirements. As a result of the significance evaluation, the Mobile Home Park and its associated buildings were not found eligible under all NRHP and CRHR designation criteria and integrity requirements, as detailed below.

Criteria A/1: That are associated with events that have made a significant contribution to the broad patterns of our history.

Constructed in 1975, the Project site is associated with the latter years of mobile home park development in Southern California. The establishment and early growth of trailer parks and mobile home parks, particularly during the immediate post-World War II period, reflected a regional response to the massive population expansion that shaped Southern California during this time. Changes to the property type during the 1950s and 1960s reflected both practical and cultural influences that led to the near abandonment of the classic trailer and trailer park, and the development of new mobile home designs and new park types with more amenities. In Carson, this historically significant pattern of development from the 1940s through the 1960s resulted in the establishment of 18 of its 21 extant parks (and an unknown number of non-extant parks) between 1944 and 1971. Only three, including the Project site, were established after 1971. By the mid-70s, mobile home parks have evolved well beyond their post-war origins to include much larger properties, more units, and an architecturally heterogeneous mix of modular homes and larger mobile homes. The Project site embodies all of these 1970s characteristics and postdates the period of significance for the historical pattern of development. As the Project site is not associated with events that have made a significant contribution to the broad patterns of state history, it would not be eligible under Criteria A/1.

Criteria B/2: That are associated with the lives of persons significant in our past.

Research did not yield information on significant individuals in direct association with the Project site. Its owner-developer, Sei Dyo, did not live on site, and his association with it does not appear to have extended beyond ownership (along with ownership of multiple other mobile home properties). He and builder Henry C. Soto are addressed under Criteria C/3, herein. The Project site is not associated with the lives of persons significant in our past and would not be eligible under Criteria B/2.

Criteria C/3: That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

The Project site is recognizable as a larger-scale 1970s mobile home park with planning features including paved internal roads, signage, a community building, and other public amenities, and individual unit spaces reflecting consistent sizes, orientations, and setbacks. It contains a mix of mobile homes and modular homes dating from the mid-1970s to the 2010s. However, as discussed under Criteria A/1, it represents a property type and pattern of development post-dating the established period of significance ending in 1969. It is larger in size than older examples, and its mix of unit types and sizes reflects later development of designs that devoted more attention to emulating conventional house types. Carson contains at least 18 extant examples of mobile home parks which predate the Project site, most of which better embody the historic property type. One example lies within 0.5 miles of the Mobile Home Park: Bel-Aire Park (21425 South Avalon Boulevard), which was established in 1960 and retains many of its original mobile home units in their original, closely spaced configuration.

The Mobile Home Park's architect, Associated Design Consultants, was not a master practitioner known for influential or innovative work, and the Mobile Home Park's community building does not embody the distinctive characteristics of a historical type, period, or construction method. Neither the community building nor the Mobile Home Park as a whole possesses high artistic values.

The Mobile Home Park owner-developer, Sei Dyo, was a Los Angeles landscape architect who focused primarily on developing mobile home parks in Southern California. He established at least ten during the 1960s and 1970s, including at least eight under his "Imperial" brand. Dyo's Imperial Avalon Mobile Estates (Mobile Home Park) appears to have been the last of his developments, and he retained ownership of it and his other Carson property, Imperial Carson Mobile Estates (1965) into the 1980s. Dyo was a prominent developer who held headquarters in Los Angeles' Little Tokyo and participated in oral histories pertaining to Japanese American incarceration during World War II, but he does not appear to have been particularly widely known, influential, or prolific. Aside from the Imperial name, his properties do not seem to have any distinctive shared characteristics except for Japanese torii-inspired entry signage. Overall, the Mobile Home Park does not appear to be significant for its association with Dyo.

The Mobile Home Park's builder, Henry Soto of ABC Corp., was a San Pedro landscape architect and nursery owner who founded one of the largest landscape contracting firms in California, the Henry C. Soto Corp. He completed hundreds of landscaping projects in Southern California from the mid-1940s to the mid-1980s, including work for prominent properties like Los Angeles Municipal Airport (pre-Los Angeles International Airport), CBS Television City, the Hyperion Outfall, and Santa Monica City College. Soto co-founded and served as the second president of the California Landscape Contractors Association, the first and largest landscaping contractors association in the country, and led several municipal beautification campaigns. He spoke and published widely about landscape design, with a particular focus on introducing tropical species into residential as well as commercial, industrial, and institutional designs. After a palm tree-related near-bankruptcy in the early 1960s, Soto continued work under several other business names including ABC Corp. He pursued several unusual projects in the late 1960s and 1970s that focused on creating new developable land by filling low spots with household trash and discarded construction materials. His work developing the Mobile Home Park reflected this recycling ethic, which does not appear to have been particularly effective or popular. One of his completed sites, in Rolling Hills Estates, produced land which could not support conventional buildings with concrete foundations. Another proposed landfill project in Pacific Palisades was never undertaken. Soto's recycled-fill approach was suited to the development of the Mobile Home Park, since mobile homes and modular homes do not require substantial or subsurface foundations.

Despite his several failed experiments, Soto had a long and prolific period of productivity as a landscape contractor and was regionally influential in the field of landscape design and construction. He appears to have been a master practitioner. However, the Mobile Home Park's size, orientation, and spatial configuration do not reflect innovative or unusual approaches. Its landscaping is minimal, restricted to small areas at the Mobile Home Park entry and around the community building. There are no "greenbelt" areas or street trees along internal roads or near individual units. While tropical and Japanese garden-appropriate plantings are present in some areas, they are not part of a unified design scheme and do not appear to reflect an overarching landscape design approach by Henry Soto, Sei Dyo, or any other individual. Mature trees that likely date to the Mobile Home Park's original development, including those fronting the property's west perimeter along Grace Avenue, are evergreen species rather than the tropical species typical of Soto's designs. Furthermore, most of the landscaped areas appear to have been altered over time. Soto planted mature olive trees along the Avalon Boulevard side of the Mobile Home Park during construction to obscure the activity; these trees are no longer present. While the Mobile Home Park may be associated with Soto, it is on the latter end of his work and does not exhibit any of his trademark design characteristics.

While the Mobile Home Park is a distinguishable entity, the contributing components lack individual distinction, it is not historically significant due to its relatively late age, its mix of unit types, and its lack of strong association with significant landscape contractor Henry C. Soto. As a result, the Mobile Home Park would not be eligible under Criteria C/3.

Criteria D/4: That have yielded, or may be likely to yield, information important in prehistory or history.

The Mobile Home Park has not and is unlikely to yield any information important in prehistory or history given the disturbed nature of the site, and therefore would not be eligible under NRHP/CRHR Criteria D/4.

In summary, the Mobile Home Park is not considered a resource for the purposes of CEQA. Therefore, impacts associated with historical resources would be **less than significant**.

Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less-than-Significant Impact. No archaeological resources were identified within the Project site or immediate vicinity as a result of the pedestrian survey, the SCCIC records search, additional background research, and the search of the NAHC's SLF. The Project site has undergone extensive modification over time, with the entirety of the site's surface having been created by the introduction of fill materials to reclaim the previously unusable land here. In addition, a recent small utility excavation near the entrance to the Mobile Home Park was observed; these soils appear to be made up of fill materials. It is expected that the majority of the soils underlying the Mobile Home Park are of similar constituency. Fill soils underlying the Project site range from 15 to 35 feet in depth (Appendix E) and the Project would involve ground disturbance as deep as 45 feet below ground surface. While the Project would disturb native sediments, the entire Project site was historically fully inundated (see Figure 4.3-1) which would have made the site uninhabitable for occupation, making the likelihood to encounter archeological resources very low. As such, it is not anticipated that the Project would affect archeological resources, and impacts are considered **less than significant**.

Additionally, it should be noted that **MM-TCR-1** would be required to address potential impacts to TCRs, as discussed in further detail below. This mitigation measure would also further reduce the Project's already less-than-significant potential to result in impacts to archaeological resources in the unlikely event they were present on the Project site.

Would the Project disturb any human remains, including those interred outside of dedicated cemeteries?

Less-than-Significant Impact. No prehistoric or historic burials, including those interred outside of dedication cemeteries, were identified within the Project site as a result of the CHRIS records search, NAHC SLF search and tribal outreach, or pedestrian survey. Therefore, the likelihood of encountering human remains within the subsurface of any of the properties within the Project site is low. However, if human remains are encountered during grading or construction activity, those discoveries would require handling in accordance with PRC Section 5097.98, which states that in the event that human remains are discovered during construction, construction activity shall be halted, and the area shall be protected until consultation and treatment can occur as prescribed by law. Therefore, with adherence to state law, impacts would be **less than significant**. Additionally, as discussed in further detail below, **MM-TCR-1** would be required to address potential impacts to TCRs and includes a provision to address the potential discovery of human remains and/or associated funerary objects. This mitigation measure would further reduce the Project's already less-than-significant potential to result in impacts to human remains in the unlikely event they were present on the Project site.

Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a. *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?*

   Less-than-Significant Impact. No previously recorded archaeological resources of Native American origin or TCRs listed in the CRHR or a local register were identified within the Project site through the SCCIC records or Native American coordination. Further, no TCRs have been identified by California Native American tribes as part of the City's AB 52 and SB 18 notification and consultation process. Therefore, impacts associated with resources identified in the CRHR or defined in PRC 5020.1(k) would be **less than significant**.

b. *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?*

   Less-than-Significant Impact with Mitigation Incorporated. The NAHC provided the City with a list of five Native American tribes and/or individuals who may have knowledge of cultural resources in the Project site. On December 31, 2019, the City mailed certified notification letters to all five contacts provided as part of the City's AB 52 and SB 18 notification and consultation process. To date, one response was received from Andrew Salas, Chairperson of the Gabrieleño Band of Mission Indians – Kizh Nation and government-to-government consultation with the Gabrieleño Band of Mission Indians – Kizh Nation was conducted on March 19, 2020. The Gabrieleño Band of Mission Indians – Kizh Nation provided maps on April 20, 2020, and noted that a village site was located in the vicinity of the Project site, though none were identified within the Project site itself. Additionally, on April 20, 2020, the Gabrieleño Band of Mission Indians – Kizh Nation provided the City their recommended mitigation measures and conditions of approval for the Project.

   Despite the disturbed nature of the Project site and the fact that the archaeological sensitivity of the Project site is considered to be very low, the City is committed to preserving the integrity of cultural resources. Thus, in response to the requests by the Gabrieleño Band of Mission Indians – Kizh Nation, MM-TCR-1 is required to ensure that a Native American Monitor approved by the Gabrieleno Band of Mission Indians-Kizh Nation is able to observe subsurface construction activities and to ensure that if any potential tribal cultural resources are encountered, a qualified archaeologist and a representative from the Gabrieleno Band of Mission Indians-Kizh Nation shall be able to evaluate the find. Therefore, protocols for the inadvertent discovery of TCRs are included as **MM-TCR-1**, which would reduce the Project's potentially significant impacts to TCRs. Therefore, with the implementation of **MM-TCR-1**, impacts associated with TCRs would be **less than significant**.

Would the Project have cumulatively considerable impacts with regards to cultural resources or tribal cultural resources?

Less-than-Significant with Mitigation Incorporated. Cumulative impacts on cultural and tribal cultural resources consider whether impacts of the Project together with related past, present, and reasonably foreseeable projects identified within the vicinity of the Project site, when taken as a whole, substantially diminish the number of cultural or tribal resources within the same or similar context or property type. However, impacts to cultural and tribal cultural resources, if any exist, tend to be site-specific.

Impacts to archaeological resources and tribal cultural resources from past, present, and reasonably foreseeable cumulative projects may have or still require extensive excavation in culturally sensitive areas and, thus, may result in adverse effects to known or previously unknown, inadvertently discovered archaeological resources. However, as previously discussed, there are no known cultural or tribal cultural resources on the Project site and, as such, the Project site is not part of an existing or known grouping or district of cultural or tribal cultural resources that would be impacted as part of the cumulative impacts from other projects. Nonetheless, the Project would be required to implement MM-TCR-1, which would help address potential cumulative impacts to archaeological resources and tribal cultural resources.

Impacts to historical resources, if any, tend to be site specific. However, cumulative impacts would occur if the Project and related projects cumulatively affect historical resources in the immediate vicinity, contribute to changes within the same historic district, or involve resources that are examples of the same property type as those on the Project site. The Project would not result in any cumulative impacts to historical resources because the Project by itself would not have an impact on historical resources and it therefore would not substantially diminish the number or significance of historical resources within the immediate vicinity or within the same or similar context or property type. For example, while other projects in the City could result in the replacement of mobile home parks that could potentially be historic, the Project would not combine with these other hypothetical projects to produce a significant impact because the mobile home park that the Project would replace was determined to not be a historical resource under CEQA.

Cumulative impacts to historical resources must also consider changes within the same historic district. The Project site is not located within the boundaries of a historic district. Therefore, there would be no potential to contribute cumulative impacts to a historic district. Additionally, cumulative impacts to historical resources must consider whether a project substantially diminishes the number or significance of historical resources of the same property type, even if they are not otherwise on the related projects list. Historical resources that are potentially affected by related projects would also be subject to the same requirements of CEQA as the Project and any impacts would be mitigated, as applicable. These determinations would be made on a case-by-case basis, and the effects of cumulative development on cultural and tribal cultural resources would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. Therefore, the project's contribution towards cumulative impacts would be **less than significant with mitigation incorporated** (**MM-TCR-1**).

4.3.5 Mitigation Measures

The following mitigation measure would reduce potentially significant impacts of the proposed Project to cultural resources and tribal cultural resources related to inadvertent discovery to a less-than-significant level.

MM-TCR-1 **Retain a Native American Monitor/Consultant.** The Project Applicant shall be required to retain and compensate for the services of a Tribal monitor/consultant who is both ancestrally affiliated with the Project area and approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the Native American Heritage Commission's (NAHC) Tribal Contact list for the area of the project location. This list is provided by the NAHC. A Native American monitor shall be retained by the Lead Agency or owner of the project to be on site to monitor all project-related, ground-disturbing construction activities (i.e., boring, grading, excavation, potholing, trenching, etc.). A monitor associated with one of the NAHC recognized Tribal governments which have commented on the project shall provide the Native American monitor. The monitor/consultant will only be on-site during the construction phases that involve ground disturbing activities. Ground

disturbing activities are defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day's activities, including construction ground disturbing activities, locations, soil, and any cultural materials identified, if any. The on-site monitoring shall end when the Project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal Cultural Resources.

Unanticipated Discovery of Tribal Cultural and Archaeological Resources. Upon discovery of any tribal cultural or archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. All tribal cultural and archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor/consultant. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request preservation in place or recovery for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, additional protective mitigation takes place (CEQA Guidelines Section 15064.5[f]). If a resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource, time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources.

Public Resources Code Section 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. All Tribal Cultural Resources shall be returned to the Tribe. Any historical archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to the Tribe of a local school or historical society in the area for educational purposes.

Unanticipated Discovery of Human Remains and Associated Funerary Objects. Native American human remains are defined in PRC Section 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC Section 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, they shall contact, by telephone within 24 hours, the NAHC and PRC Section 5097.98 shall be followed.

Resource Assessment and Continuation of Work Protocol. Upon discovery of human remains, the tribal and/or archaeological monitor/consultant will immediately divert work at minimum of 150 feet and place an exclusion zone around the discovery location. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are human and

subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).

Kizh-Gabrieleno Procedures for Burials and Funerary Remains. If the Gabrieleno Band of Mission Indians-Kizh Nation is designated MLD, the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.

Treatment Measures. Prior to the continuation of ground disturbing activities, the landowner shall arrange a designated site location within the footprint of the Project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard shall be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the Project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically, and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure complete recovery of all material. If the discovered of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does not authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.

Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects, and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the Project site but at a location agreed upon between the Tribe and the landowner at the site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.

Professional Standards. Archaeological and Native American monitoring and excavation during construction projects will be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects shall be taken. Principal personnel must meet the Secretary of Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist shall ensure that all other personnel are appropriately trained and qualified.

4.3.6 Level of Significance After Mitigation

After implementation of **MM-TCR-1**, all impacts would be **less than significant**.

4.3.7 References

City of Carson. 2004. *City of Carson General Plan*. Adopted 2004. Accessed January 2021. https://ci.carson.ca.us/communitydevelopment/generalplan.aspx.

World Atlas. 2018. "What Is A Slough?" March 16, 2018. Accessed August 2021. https://www.worldatlas.com/articles/what-is-a-slough.html.

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4.4 Energy

This section describes the existing energy conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project).

Information contained in this section is based on Energy Analysis Technical Memorandum of the Project area provided by Michael Baker International on August 13, 2021 (Appendix D). Other sources consulted are listed in Section 4.4.7, References.

4.4.1 Existing Conditions

The environmental setting for the Project, as it relates to electricity, natural gas, and petroleum (including associated service providers, supply sources, and estimated consumption) is discussed herein.

Southern California Edison (SCE) provides electrical services to the Los Angeles County (County) through State-regulated public utility contracts. Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California's electrical system has become more reliant on renewable energy sources, including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, electricity generation is usually not tied to the location of the fuel source and can be delivered great distances via the electrical grid. The generating capacity of a unit of electricity is expressed in megawatts. Net generation refers to the gross amount of energy produced by a unit, minus the amount of energy the unit consumes. Generation is typically measured in megawatt-hours, kilowatt-hours, or gigawatt-hours.

The Southern California Gas Company provides natural gas services to the County. Natural gas is a hydrocarbon fuel found in reservoirs beneath the Earth's surface and is composed primarily of methane (CH_4). It is used for space and water heating, process heating and electricity generation, and as transportation fuel. Use of natural gas to generate electricity is expected to increase in coming years as it is a relatively clean alternative to other fossil fuels like oil and coal. In California and throughout the western United States, many new electrical generation plants fired by natural gas are being brought online. Thus, there is great interest in importing liquefied natural gas from other parts of the world. Nearly 45% of natural gas burned in California was used for electricity generation. While the supply of natural gas in the United States and production has increased greatly, California produces little and imports 90% of its natural gas (CEC n.d.[a]).

Electricity and natural gas services are available to locations where land uses could be developed. The County's ongoing development review process includes a review and comment opportunity for privately-owned utility companies, including SCE and Southern California Gas Company, to allow informed input from each utility company on all development proposals. The input facilitates a detailed review of all projects by service purveyors to assess the potential demands for utility services on a project-by-project basis. The ability of utility providers to provide services concurrently with each project is evaluated during the development review process. Utility companies are bound by contract to update energy systems to meet any additional demand.

Energy usage is typically quantified using the British Thermal Unit (BtU). Total energy usage in California was 7,802.3 trillion BTUs in 2019 (the most recent year for which this specific data is available), which equates to an

average of 197.8 million BTUs per capita (EIA 2019d). Of California's total energy usage, the breakdown by sector is 39.4% transportation, 23.1% industrial, 18.8% commercial, and 18.7% residential (EIA 2019d). Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use (EIA 2021). In 2018, taxable gasoline sales (including aviation gasoline) in California accounted for 15,589,042,965 gallons of gasoline (CDTFA n.d.[a]), and diesel sales in California accounted for 3,073,917,507 gallons of diesel (CDTFA n.d.[b]).

The electricity consumption attributable to the County from 2010 to 2019 is shown in Table 4.4-1, Electricity Consumption in Los Angeles County 2010–2019. As indicated in Table 4.4-1, electricity consumption in the County remained relatively constant with a slight decrease between 2010 and 2019.

The natural gas consumption attributable to the County from 2010 to 2019 is shown in Table 4.4-2, Natural Gas Consumption in Los Angeles County 2010–2019. Natural gas consumption in the County remained relatively constant between 2010 and 2019 with no substantial increase or decrease.

Table 4.4-1. Electricity Consumption in Los Angeles County 2010–2019

Year	Electricity Consumption (in millions of kilowatt hours)
2010	68,272
2011	68,209
2012	69,274
2013	68,366
2014	69,946
2015	69,601
2016	69,448
2017	69,191
2018	68,486
2019	66,118

Source: CEC 2016b.

Table 4.4-2. Natural Gas Consumption in Los Angeles County 2010–2019

Year	Electricity Consumption (in millions of kilowatt hours)
2010	3,048
2011	3,056
2012	2,959
2013	3,067
2014	2,794
2015	2,762
2016	2,878
2017	2,957
2018	2,921
2019	3,048

Source: CEC. n.d.(a).

Automotive fuel consumption in the County from 2010 to 2019 is shown in Table 4.4-3, Automotive Fuel Consumption in Los Angeles County 2010–2020 (projections for year 2020 are also shown).

Table 4.4-3. Automotive Fuel Consumption in Los Angeles County 2010–2020

Year	On-Road Automotive Fuel Consumption (Gallons)	Heavy-Duty Vehicle/Diesel Fuel Consumption (Construction Equipment) (Gallons)
2010	4,117,442,025	445,107,369.31
2011	4,046,955,751	459,208,265.38
2012	4,012,068,093	455,587,873.56
2013	4,023,829,954	482,997,400.45
2014	4,060,941,103	483,501,695.01
2015	4,187,232,991	483,293,224.63
2016	4,292,246,007	516,329,430.87
2017	4,294,811,615	517,173,294.86
2018	4,189,699,939	525,148,755.84
2019	4,073,114,700	529,979,035.56
2020 (projected)	3,975,480,911	533,800,838.05

Source: CARB 2020.

4.4.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. In addition to setting increased corporate average fuel economy standards for motor vehicles, the EISA includes the following other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

This federal legislation requires ever-increasing levels of renewable fuels (the RFS) to replace petroleum (EPA 2015). The U.S. Environmental Protection Agency (EPA) is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of

renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the RFS program was expanded in several keyways that lay the foundation for achieving significant reductions in greenhouse gas (GHG) emissions from the use of renewable fuels, reducing imported petroleum, and encouraging the development and expansion of the renewable fuels sector in the United States. The updated program is referred to as "RFS2" and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline.
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- EISA established new categories of renewable fuel and set separate volume requirements for each one.
- EISA required the EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

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

State

Warren-Alquist Act

The California Legislature passed the Warren-Alquist Act in 1974. The Warren-Alquist Act created the California Energy Commission (CEC). The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation's first energy conservation standards for both buildings constructed and appliances sold in California.
- The act transferred the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high-demand projections, to a more impartial CEC.
- The CEC was directed to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources.

State of California Energy Action Plan

The CEC and California Public Utilities Commission (CPUC) approved the first State of California Energy Action Plan in 2003. The plan established shared goals and specific actions to ensure that adequate, reliable, and reasonably priced electrical power and natural gas supplies are provided, and identified policies, strategies, and actions that are cost-effective and environmentally sound for California's consumers and taxpayers. In 2005, a second Energy Action Plan was adopted by the CEC and CPUC to reflect various policy changes and actions of the prior 2 years.

At the beginning of 2008, the CEC and CPUC determined that it was not necessary or productive to prepare a new energy action plan. This determination was based, in part, on a finding that the state's energy policies have been

significantly influenced by the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (discussed in the following subsection). Rather than produce a new energy action plan, the CEC and CPUC prepared an "update" that examines the state's ongoing actions in the context of global climate change.

Senate Bills 1078 (2002), 107 (2006), X1-2 (2011), 350 (2015), and 100 (2018)

Senate Bill (SB) 1078 established the California Renewables Portfolio Standard (RPS) Program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20% standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. The bill relatedly required the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy. SB 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20% of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 (2011) requires all California utilities to generate 33% of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 sets a three-stage compliance period: by December 31, 2013, 20% had to come from renewables; by December 31, 2016, 25% had to come from renewables; and by December 31, 2020, 33% will come from renewables.

SB 350 (2015) expanded the RPS because it requires retail seller and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030, with interim goals of 40% by 2024 and 45% by 2027.

SB 100 (2018) accelerated and expanded the standards set forth in SB 350 by establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 also states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources does not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Consequently, utility energy generation from non-renewable resources is expected to be reduced based on implementation of the 60% RPS in 2030. Therefore, any project's reliance on non-renewable energy sources would also be reduced.

Assembly Bill 1007 (2005)

AB 1007 (2005) required the CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the plan in partnership with the California Air Resources Board (CARB) and in consultation with other state agencies, plus federal and local agencies. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Assembly Bill 32 (2006) and Senate Bill 32 (2016)

In 2006, the state legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the legislature enacted SB 32, which

extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, CARB prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focused on increasing energy efficiencies, using renewable resources, and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the state's GHG emissions reduction planning framework creates co-benefits for energy-related resources. Additional information on AB 32 and SB 32 is provided in Section 4.6, Greenhouse Gas Emissions, of this Draft Environmental Impact Report.

California Building Standards

Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies. In general, single-family residences built to the 2019 Title 24 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards will use approximately 53% less energy than those under the 2016 standards (CEC 2018a). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018a).

Title 24 also includes Part 11, the California Green Building Standards (CALGreen). The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The 2019 CALGreen standards became effective on January 1, 2020. The mandatory standards require the following:

- 20% mandatory reduction in indoor water use
- 50% diversion of construction and demolition waste from landfills
- Mandatory inspections of energy systems to ensure optimal working efficiency

Integrated Energy Policy Report

The CEC is responsible for preparing integrated energy policy reports that identify emerging trends related to energy supply, demand, conservation, public health and safety, and maintenance of a healthy economy. The CEC's 2018 Integrated Energy Policy Report discusses the state's policy goals of decarbonizing buildings, doubling energy efficiency savings and increasing flexibility in the electricity grid system to integrate more of renewable energy. Specifically for the decarbonizing of building energy, the goal would be achieved by designing future commercial and residential buildings to have their energy sourced almost entirely from electricity in place of natural gas. Regarding the increase in renewable energy flexibility, the goal would be achieved through increases in energy storage capacity within the state, increases in energy efficiency, and adjusting energy use to the time of day when the most amount of renewable energy is being generated. Over time these policies and trends would serve to beneficially reduce the Project's GHG emissions profile and energy consumption as they are implemented.

State Vehicle Standards

In response to the transportation sector accounting for more than half of California's carbon dioxide (CO_2) emissions, AB 1493 was enacted in 2002. AB 1493 required CARB to set GHG emissions standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. The bill required that CARB set GHG emissions standards for motor vehicles manufactured in 2009 and all subsequent model years. The 2009–2012 standards resulted in a reduction in approximately 22% of GHG emissions compared to emissions from the 2002 fleet, and the 2013–2016 standards resulted in a reduction of approximately 30%.

In 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global-warming gases with requirements for greater numbers of zero-emissions vehicles into a single package of standards called Advanced Clean Cars. By 2025, when the rules would be fully implemented, new automobiles would emit 34% fewer global-warming gases and 75% fewer smog-forming emissions (CARB 2021).

Although the focus of the state's vehicle standards is on the reduction of air pollutants and GHG emissions, one co-benefit of implementation of these standards is a reduced demand for petroleum-based fuels.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet its GHG emissions reduction mandates established in AB 32. As codified in California Government Code Section 65080, SB 375 requires Metropolitan Planning Organizations (e.g., the Southern California Association of Governments) to include a Sustainable Communities Strategy (SCS) in their Regional Transportation Plan (RTP). The main focus of the SCS is to plan for growth in a fashion that will ultimately reduce GHG emissions, but the strategy is also part of a bigger effort to address other development issues, including transit and vehicle miles traveled, which influence the consumption of petroleum-based fuels.

Local

Southern California Association of Governments

On September 3, 2020, the Regional Council of Southern California Association of Governments formally adopted the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments – Connect SoCal (2020–2045 RTP/SCS).[1] The SCS portion of the 2020–2045 RTP/SCS highlights strategies for the region to reach the regional target of reducing GHGs from autos and light-duty trucks by 8% per capita by 2020, and 19% by 2035 (compared to 2005 levels). Specially, these strategies are:

- Focus growth near destinations and mobility options
- Promote diverse housing choices
- Leverage technology innovations

[1] The South Coast Air Quality Management District is currently working on the 2022 Air Quality Management Plan (2022 AQMP). The 2022 AQMP will incorporate the recently adopted SCAG 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS). However, until the adoption of the 2022 AQMP, Project AQMP consistency will be analyzed off the 2016 AQMP and the RTP/SCS that was adopted at the time, the 2016–2040 RTP/SCS.

- Support implementation of sustainability policies
- Promote a green region

Furthermore, the 2020–2045 RTP/SCS discusses a variety of land use tools to help achieve the state-mandated reductions in GHG emissions through reduced per capita vehicle miles traveled. Some of these tools include center focused placemaking, focusing on priority growth areas, job centers, transit priority areas, as well as high quality transit areas and green regions.

4.4.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to energy are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to energy would occur if the Project would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.
3. Result in cumulatively considerable energy impacts.

4.4.4 Impacts Analysis

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

Less-than-Significant Impact. Implementation of the Project would increase the demand for electricity and natural gas at the Project site and gasoline consumption in the region during construction and operation but not above available supply.

Existing Uses

The existing Project site is currently developed with the Imperial Avalon Mobile Estates mobile home park (Mobile Home Park), which consists of 225 mobile home coaches, a recreational vehicle storage yard, and a common area with a clubhouse, grass field, recreation building, swimming pool, and guest parking spaces. A California Emissions Estimator Model (CalEEMod) was conducted to quantify the existing energy and natural gas use, as well as yearly vehicle miles traveled from the Mobile Home Park (Appendix D). Trip generation rates associated with the existing use were based on the Imperial Avalon Local Transportation Assessment (Transportation Assessment) prepared by Fehr and Peers (Appendix I). According to the Transportation Assessment, the existing Project site generates approximately 1,141 mobile daily trips. The existing energy use was deducted from the proposed Project's energy use; refer to Appendix D for existing use energy consumption.

Proposed Project

The Project's estimated net energy consumption (Project minus existing) is summarized in Table 4.4-4, Net Project and Countywide Energy Consumption; refer to Appendix D for modeling assumptions. As shown in Table 4.4-4, the Project's construction and net operational electricity usage would increase Los Angeles County's consumption by 0.0006% and 0.009%, respectively. Natural gas would not be consumed during Project construction activities;

however, natural gas consumed during Project operations represents an approximate 0.0030% increase over Los Angeles County's typical annual natural gas consumption. The Project's construction and net operational vehicle fuel consumption would increase Los Angeles County's consumption by 0.1080% and 0.0307%, respectively.

Table 4.4-4. Net Project and Countywide Energy Consumption

Energy Type	Project Annual Energy Consumption[1]	Los Angeles County Annual Energy Consumption[2]	Percentage Increase Countywide[2]
Electricity Consumption			
Construction Electricity Consumption	389 MWh	66,118,673 MWh	0.0006
Net Operational Electricity Consumption	6,048 MWh	66,118,673 MWh	0.0091
Natural Gas Consumption[3]			
Net Operational Natural Gas Consumption	92,085 therms	3,048,320,959 therms	0.0030
Fuel Consumption			
Construction Fuel Consumption[4]	547,270 gallons	531,826,198 gallons	0.1080
Net Operational Automotive Fuel Consumption[4]	1,010,922 gallons	3,294,542,958 gallons	0.0307

Source: Refer to Appendix D for assumptions used in this analysis.
MWh = megawatt hours
1 As modeled in CalEEMod version 2016.3.2.
2 The Project increases in electricity and natural gas consumption are compared to the total consumption in Los Angeles County in 2019. The Project increases in automotive fuel consumption are compared with the projected Countywide diesel fuel consumption in 2022 (start of construction), and gasoline fuel consumption in 2027 (operational year).
Los Angeles County natural gas consumption data source: CEC n.d.(a).
Los Angeles County electricity consumption data source: CEC n.d.(b).
3 It is anticipated that Project construction activities would not consume natural gas.
4 Project fuel consumption calculated based on CalEEMod results. Countywide fuel consumption is from the CARB EMFAC2017 model.

Construction-Related Energy

Project construction would consume energy in two general forms:

(1) The electricity and fuel energy consumed by construction vehicles and equipment
(2) Bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass

It should be noted that construction activities would not consume natural gas.

Construction Electricity Consumption

Construction activities would require temporary electricity consumption. As previously discussed, SCE is the electricity provider for the Project site. In order to quantify construction electricity consumption, the power cost must be determined. Based on the 2017 National Construction Estimator, the typical power cost per 1,000 square feet of building construction per month is estimated to be $2.32 (Pray 2016). The Project proposes to develop the site with 1,527,694 square feet of residential uses and 10,352 square feet of commercial uses over the course of approximately 60 months. As a result, the total power cost of the on-site electricity usage during the construction of the proposed Project is estimated to be

approximately $214,096. Furthermore, as of June 1, 2021, SCE's general service rate schedule (GS-1) is approximately $0.11 per kilowatt hour of electricity (SCE 2015). As shown in Table 4.4-4, the electricity usage from Project construction related activities is estimated to be approximately 389 megawatt-hours per year of construction. Thus, the Project's construction electricity consumption would represent a temporary increase of approximately 0.0006% in electricity consumption over the current Countywide usage.

Construction Transportation Consumption

Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during demolition, grading, paving, building construction, and architectural coatings. Fuel energy consumed during construction would be temporary and would not represent a significant demand on energy resources. In addition, some incidental energy conservation would occur during construction through compliance with California Code of Regulations, Title 13, Section 2449(d)(3) and 2485, which minimizes the idling time of heavy-duty diesel equipment either by shutting it off when not in use or by reducing the time of idling to nor more than 5 minutes. Project construction equipment would also be required to comply with the latest EPA and CARB engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction. As indicated in Table 4.4-4, the Project's fuel consumption from construction would be approximately 574,270 gallons, which would increase fuel use in the County by 0.1080%. As such, construction would have a nominal effect on the local and regional energy supplies. It is noted that construction fuel use is temporary and would cease upon completion of construction activities.

Construction Material Consumption

Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The Project-related incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest in minimizing the cost of doing business.

It should be noted that energy intensiveness of materials is not addressed because the California Governor's Office of Planning and Research has explained that "a full 'lifecycle' analysis that would account for energy in building materials and consumer products will generally not be required." Such an analysis runs a substantial risk of double counting energy use and associated GHG emissions (OPR 2018).

Construction-Related Energy Conclusion

There are no unusual Project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or State. Moreover, the Project would implement Project Design Feature (PDF) PDF-AQ-1, which requires that during Project construction, all internal combustion engines/construction equipment operating on the Project site shall meet EPA-certified Tier 4 Interim/Final emissions standards. Implementation of this PDF would result in the Project being constructed with equipment that is more fuel-efficient than other equipment commonly being operated throughout the region.

Therefore, construction fuel consumption would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. As such, a **less-than-significant** impact would occur in this regard.

Operational Energy Consumption

Transportation Energy Demand

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration is responsible for establishing additional vehicle standards and for revising existing standards. Compliance with Federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. Table 4.4-4 provides an estimate of the daily fuel consumed by vehicles traveling to and from the Project site. As indicated in Table 4.4-4, Project net new operations are estimated to consume approximately 1,010,922 gallons of fuel per year, which would increase Los Angeles County's automotive fuel consumption by 0.0307%. The Project would not result in any unusual characteristics that would result in excessive operational fuel consumption associated with vehicular travel. Fuel consumption associated with Project-related vehicle trips would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

The key drivers of transportation-related fuel consumption are job locations/commuting distance and many personal choices on when and where to drive for various purposes. Those factors are outside of the scope of the design of the proposed Project. However, the Project would include on-site electric vehicle (EV) charging stations in parking lots in compliance with CALGreen. This would encourage and support the use of EVs by workers and visitors of the proposed Project and thus reduce the petroleum fuel consumption. It should be noted that a reduction in petroleum fuel consumption was not accounted for in the Project operational automotive fuel consumption identified in Table 4.4-4. This is due to the speculative nature of assuming a quantitative reduction in fuel consumption generated by the electric vehicle charging stations. Therefore, the Project operational automotive fuel consumption identified in Table 4.4-4 is considered conservative.

Therefore, fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Electricity Demand

The CEC developed 2018–2030 forecasts for energy consumption and peak demand in support of the 2017 Integrated Policy Energy Report for each of the major electricity and natural gas planning areas and the State based on the economic and demographic growth projections. CEC forecasts that the statewide annual average growth rates of energy demand between 2016 and 2030 would be 0.99% to 1.59% for electricity (CEC 2018c).[2] As shown in Table 4.4-4, the operational energy consumption of the Project would represent approximately 0.0091% increase in electricity consumption over the current Countywide usage. Therefore, the Project's annual electricity usage would be significantly lower than the CEC's energy demand forecasts. The residential and commercial component of the Project would consume electricity during the same time periods as other residential and commercial developments. As a result, the Project would not result in unique or more intensive peak or base period electricity demand.

[2] Annual average growth rates of electricity demand and natural gas per capita demand are shown in Table 1 and Table 3, respectively.

Natural Gas Demand

Based on the CEC forecasts, the statewide annual average growth rates of energy demand between 2016 and 2030 would be 0.25% to 0.77% for natural gas (CEC 2018c).[3] As shown in Table 4.4-4, operational energy consumption of the Project would represent approximately 0.0030% increase in natural gas consumption over the current Countywide usage. Therefore, the Project's annual natural gas usage would be significantly lower than the CEC's energy demand forecasts. The residential and commercial component of the Project would consume natural gas during the same time periods as other residential and commercial developments. As such, the Project would not result in unique or more intensive peak or base period natural gas demand.

Operational Energy Efficiency

The proposed Project would be required to comply with the 2019 Title 24 Building Energy Efficiency Standards, which provide minimum efficiency standards related to various building features, including photovoltaic solar panels, appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of the 2019 Title 24 standards significantly reduces residential energy usage by 53% compared to the 2016 standards, and nonresidential energy usage by 30% compared to the 2016 standards (CEC 2018a). The Title 24 Building Energy Efficiency Standards are updated every 3 years and become more stringent between each update; therefore, complying with the latest 2019 Title 24 standards would make the proposed Project more energy efficient than existing buildings built under the earlier versions of the Title 24 standards.

Furthermore, the electricity provider, SCE, is subject to California's RPS. The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 60% of total procurement by 2030 and to 100% of total procurement by 2045. Renewable energy is generally defined as energy that comes from resources which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat. The increase in reliance of such energy resources further ensures that new development projects would not result in the waste of the finite energy resources.

Given the foregoing, the Project would not cause wasteful, inefficient, and unnecessary consumption of building energy during Project operation, or preempt future energy development or future energy conservation. A **less-than-significant impact** would occur.

Renewable Energy Potential

As part of the Project's design process, the Project Applicant considered how the Project could potentially increase its reliance on renewable energy sources to meet the Project's energy demand. Renewable energy sources that were considered for their potential to be used to power the Project, consistent with the CEC's definition of eligible renewables, include biomass, geothermal, solar, wind, and small hydroelectric facilities.

Given the Project's location in an urban area and the nature of the Project (i.e., a residential and commercial project on approximately 27.31 acres), there are considerable site constraints including limited land availability, incompatibility with onsite and surrounding land uses for large scale power generation facilities, unknown interconnection feasibility, compatibility with utility provider systems, and no known water or geothermal resources to harness, that would eliminate the potential for biomass, geothermal, and hydroelectric renewable energy to be installed onsite.

[3] Annual average growth rates of electricity demand and natural gas per capita demand are shown in Table 1 and Table 3, respectively.

Regarding wind power, first, due to the urban nature of the site and surrounding land uses, wind turbines are generally not feasible as it represents an incompatible use. Specifically, a general rule of thumb is to install a wind turbine on a tower with the bottom of the rotor blades at least 30 feet above anything within a 500-foot horizontal radius and to be sited upwind of buildings and trees (APA 2011, NREL 2015), which the Project site cannot accommodate. Secondly, ideal places for wind turbines are where the annual average wind speed is at least 9 miles per hour for small wind turbines and 13 miles per hour for utility-scale turbines (EIA 2022), while the yearly average windspeed at the Los Angeles International Airport is 6.9 miles per hour, which is determined to be the most available representative data set for the Project site (Weatherspark 2022). As such, wind power was not determined to be feasible for the Project.

Regarding solar power, building roofs would be solar ready to facilitate the future installation of solar panels. While the Project does not propose battery storage at the time, the Project does not preclude installation of battery storage in the future if determined to be a feasible and compatible land use of the site.

Operational Energy Consumption Conclusion

As depicted in Table 4.4-4, operational energy consumption would represent an approximate 0.0091% increase in electricity consumption and a 0.0030% increase in natural gas consumption over the current Countywide usage. The Project would adhere to all Federal, State, and local requirements for energy efficiency, including the Title 24 standards. Additionally, the Project would not result in a substantial increase in demand for transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure. The Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy. Additionally, due diligence was undertaken as part of the Project's design process to evaluate how the Project could potentially increase its reliance on renewable energy sources to meet the Project's energy demand. Based on the foregoing, a **less-than-significant** impact would occur in this regard.

Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less-than-Significant Impact. The Project would comply with all applicable goals and measures identified in the City's Energy Efficiency Climate Action Plan (EECAP), as listed in Table 4.4-5, Community-Oriented EECAP Strategies. The EECAP contains energy efficient goals and measures that would help implement energy efficient measures and would subsequently reduce GHG emissions within the City. Furthermore, the Project's consistency with the City's Climate Action Plan (CAP) measures that help reduce energy usage is discussed in Table 4.4-6, Project Consistency with CAP. As seen in Table 4.4-5 and Table 4.4-6, the Project would comply with all applicable City goal's for reducing energy usage and implementing energy efficiency. Specifically, compliance with Title 24 and CALGreen standards would ensure the Project incorporates energy efficient windows, insulation, lighting, ventilation systems, as well as water efficient fixtures and EV charging infrastructure. Further, the Project's compliance with Title 24 standards would ensure solar photovoltaic systems are installed for new residential development. Adherence to the Title 24 energy requirements will ensure conformance with the State's goal of promoting energy and lighting efficiency, and the City's EECAP and CAP. Therefore, the proposed Project would result in less than significant impacts associated with renewable energy or energy efficiency plans.

Table 4.4-5. Community-Oriented Energy Efficiency Climate Action Plan Strategies

Goal	Measure	Project Compliance
Goal 4: Increase Energy Efficiency in New Commercial Development	**Measure 2.1**: Encourage or Require Energy Efficiency Standards Exceeding Title 24	**Consistent.** As the 2013 Title 24 standards went into effect on July 1, 2014, the 2015 Energy Efficiency Climate Action Plan (EECAP) used efficiency measures outlined in the 2013 Title standards. Since then, the 2016 Title 24 and 2019 Title 24 standards were adopted. The 2016 Title 24 standards, which took effect on January 1, 2017, were 5% more efficient than the 2013 Title 24 standards for non-residential construction. Further, the 2019 Title 24 standards, which took effect on January 1, 2020, uses 30% less energy than non-residential buildings built under the 2016 nonresidential standards, and uses 53% less energy than residential buildings built under the 2016 residential standards. This reduction is primarily due to more efficient lighting standards, photovoltaic solar panels, and energy efficient windows/insulation. Therefore, as the Project would comply with 2019 Title 24 standards, the Project would achieve a substantial reduction in energy usage when compared to the 2013 Title 24 standards required by the EECAP Measure 2.1.
Goal 5: Increase Energy Efficiency through Water Efficiency	**Measure 5.1**: Promote or Require Water Efficiency through The Water Conservation Act of 2009 (SB X7-7)	**Consistent**. The Project would consume water from water suppliers that would comply with Senate Bill X7-7 and the Water Sector of the AB 32 Scoping Plan. In addition, the Project's irrigation systems would be controlled by an evapotranspiration weather-based control system to minimize water usage and reduce irrigation runoff. Further, the Project would comply with outdoor water conservation measures outlined per California water regulations (AB 1881) and local water efficient landscape ordinances.
	Measure 5.2: Promote WE Standards Exceeding SB X7-7	
Goal 6: Decrease Energy Demand through Reducing Urban Heat Island Effect	**Measure 6.1:** Promote Tree Planting for Shading and Energy Efficiency	**Consistent.** The proposed Project would include a 3,000 square foot dog park, a 18,300 square foot central park, 7,000 square feet of greenbelt. This open space would help decrease energy demand by reducing the urban heat island effect on the Project site. Furthermore, trees would be dispersed throughout the Project site. Landscaping within the Project site will be designed with predominantly drought tolerant species, including the use of natives and seasonal
	Measure 6.2: Incentivize or Require Light-Reflecting Surfaces	

Table 4.4-5. Community-Oriented Energy Efficiency Climate Action Plan Strategies

Goal	Measure	Project Compliance
		ornamental plantings. Thus, the Project would comply with Measure 6.1 and 6.2.

Sources: SBCCG 2015; CEC. 2018a.

Table 4.4-6. Project Consistency with Climate Action Plan

Goal	Measure	Project Compliance
Goal LUT: A – Accelerate the Market for EV Vehicles	**Measure LUT: A2 – EV Charging Policies.** EV charging policies incentivize EV adoption by making it easier to charge EVs. City strategies to support these policies can range from on-the-ground implementation of charging stations (level 1, 2, and DC 3) to adopting new development standards relating to EVs.	**Consistent.** The Project would be consistent with this measure by supporting the use electric vehicles (EVs). Per the 2019 CALGreen Residential Mandatory Measure 4.106.4 and Nonresidential Mandatory Measure 5.106.5, the Project would be required to install 125 EV charging spaces, 76 EV parking spaces, and 380 EV conduits in the townhome garages.
Goal EE: B – Increase Energy Efficiency in New Residential Developments	**Measure EE: B1 – Encourage or require EE Standards Exceeding Title 24.** As part of the 2010 California Green Building Standards (CALGreen), a two-tiered system was designed to allow local jurisdictions to adopt codes that go beyond state standards. The two tiers contain measures that are more stringent and achieve an increased reduction in energy usage by 15% (Tier 1) or 30% (Tier 2) beyond Title 24. It is also important that Title 24 Standards are updated so that the full GHG reduction benefit of the title can be realized. City staff that are well-informed can implement updates quickly and effectively.	**Consistent.** The Project would comply with the 2019 Title 24 standards. The 2019 Title 24 standards, which took effect on January 1, 2020, promote photovoltaic systems in newly constructed residential buildings. With rooftop solar electricity generation, homes built under the 2019 standards will use about 53% less energy than those under the 2016 standards. Additionally, nonresidential buildings will use about 30% less energy, mainly to lighting upgrades, when compared to 2016 standards.
Goal EE: D – Increase Energy Efficiency in New Commercial Developments	**Measure EE: D1 – Encourage or require EE Standards Exceeding Title 24.**	**Consistent.** Refer to Measure EE: B1 response.
Goal EE: E. – Increase Energy Efficiency through Water Efficiency (WE)	**Measure EE: E1 – Promote or Require Water Efficiency through SB X7-7.**	**Consistent.** The Project would consume water from water suppliers that would comply with Senate Bill X7-7 and the Water Sector of the AB 32 Scoping Plan. In addition, the Project's irrigation systems would be controlled by an evapotranspiration weather-
	Measure EE: E2 – Promoting Water Efficiency Standards Exceeding SB X7-7.	

Table 4.4-6. Project Consistency with Climate Action Plan

Goal	Measure	Project Compliance
		based control system to minimize water usage and reduce irrigation runoff. Further, the Project would comply with outdoor water conservation measures outlined per California water regulations (AB 1881) and local water efficient landscape ordinances.
Goal EE: F – Decrease energy demand through reducing urban heat island effect.	**Measure EE: F1 –** Promote Tree Planting for Shading and Energy Efficiency.	**Consistent.** Trees would be dispersed throughout the Project site. Landscaping within the Project site will be designed with predominantly drought tolerant species, including the use of natives and seasonal ornamental plantings. Refer to Goal 6, Measure 6.1, identified in Table 4.4-5 for further discussion regarding Project landscaping.

Source: SBCCG. 2017; CEC 2018a.
Notes: EV = electric vehicle

Would the Project have cumulatively considerable impacts with regards to energy?

Less-than-Significant Impact. Cumulative projects that could exacerbate the Project's impacts include any projects that could result in wasteful, inefficient, or unnecessary use of energy. However, the Project would not result in wasteful, inefficient, or unnecessary use of energy, in large part due to the short-term and temporary nature of the construction period. Additionally, the operational activity would be minimized through energy reduction strategies pursuant to Title 24, as described in Section 4.4.4, Impacts Analysis. Therefore, cumulative impacts to energy use would be **less than significant**.

4.4.5 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required.

4.4.6 Level of Significance After Mitigation

All impacts were determined to be **less than significant**. No mitigation is required.

4.4.7 References

APA (American Planning Association). 2011. Planning for Wind Energy. https://planning-org-uploaded-media.s3.amazonaws.com/legacy_resources/research/wind/pdf/pas566.pdf

CAPCOA (California Air Pollution Control Officers Association). 2017. California Emissions Estimator Model (CalEEMod) User's Guide Version 2016.3.2. Prepared by Trinity Consultants and the California Air Districts. November 2017. http://www.caleemod.com.

CARB (California Air Resources Board). 2020. EMFAC 2017. March 1. Accessed June 2021. https://www.arb.ca.gov/emfac/2017/.

CARB. 2021. "About the Advanced Clean Cars Program." Accessed August 2021. https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about.

CDTFA (California Department of Tax and Fee Administration). n.d.(a). "Net Taxable Gasoline Gallons." Accessed June 29, 2021. http://www.cdtfa.ca.gov/taxes-and-fees/MVF-10-Year-Report.pdf.

CDTFA. n.d.(b). "Fuel Taxes Statistics & Reports." Accessed August 12, 2021. https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm.

CEC. 2016a. *2015 Integrated Energy Policy Report*. CEC-100-2015-001-CMF. June 29, 2016. Accessed June 2021. http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-01/TN212017_20160629T154354_2015_Integrated_Energy_Policy_Report_Small_File_Size.pdf.

CEC. 2016b. "Electricity Consumption by County" [database]. 2016. Accessed June 29, 2021. http://www.ecdms.energy.ca.gov/elecbycounty.aspx.

CEC. 2018a. "2019 Building Energy Efficiency Standards: Frequently Asked Questions" [fact sheet]. March 2018. Accessed June 29, 2021. https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf.

CEC. 2018b. *Final 2017 Integrated Energy Policy Report.* Accessed June 2021.

CEC. 2018c. *California Energy Demand 2018-2030 Revised Forecast*, February 19, 2018.

CEC. n.d.(a). "Gas Consumption by County" [database]. Accessed June 29, 2021. http://www.ecdms.energy.ca.gov/gasbycounty.aspx.

CEC. n.d.(b). "Supply and Demand of Natural Gas in California." Accessed June 29, 2021. https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california.

CPUC (California Public Utilities Commission). 2018. *2018 California Renewables Portfolio Standard Annual Report*. November 2018. Accessed June 2021. http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/Renewables%20Portfolio%20Standard%20Annual%20Report%202018.pdf.

EIA (U.S. Energy Information Administration). 2018a. "California State Energy Profile". Last updated November 15, 2018. Accessed June 2021. https://www.eia.gov/state/print.php?sid=CA.

EIA. 2018b. "California State Profile and Energy Estimates – Table F15: Total Petroleum Consumption Estimates, 2016." Accessed June 2021. http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US&sid=CA.

EIA. 2019a. "State Electricity Profiles – California Electricity Profile 2017". January 8, 2019. Accessed June 2021. https://www.eia.gov/electricity/state/california/index.php.

EIA. 2019b. "Natural Gas Consumption by End Use." Accessed June 2021. https://www.eia.gov/dnav/ng/ng_cons_sum_a_EPG0_VC0_mmcf_a.htm.

EIA. 2019c. “Use of Energy in the United State Explained, Energy Use for Transportation.” Accessed June 2021. https://www.eia.gov/energyexplained/ ?page= us_energy_transportation.

EIA. 2019d. “Table F33: Total Energy Consumption, Price, And Expenditure Estimates, 2019.” Accessed June 29, 2021. https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html /fuel_te.html&sid=CA.

EIA. 2021. “California State Profile and Energy Estimates, Profile Overview” [interactive map]. Last updated February 19, 2021. Accessed June 29, 2021. https://www.eia.gov/state/?sid=CA.

EPA (U.S. Environmental Protection Agency). 2015. “Overview for Renewable Fuel Standard.” Last updated September 28, 2015. Accessed June 2021. https://www.epa.gov/renewable-fuel-standard-program/program-overview-renewable-fuel-standard-program.

NREL (National Renewable Energy Laboratory). 2015. Small Wind Site Assessment Guidelines. https://www.nrel.gov/docs/fy15osti/63696.pdf

OPR (Office of Planning and Research). 2018. *Final Statement of Reasons for Regulatory Action Amendments to the State CEQA Guidelines*. November 2018. Accessed June 2021.

Pray, Richard. 2016. 2017 *National Construction Estimato*r. Carlsbad: Craftsman Book Company. November 2016.

SBCCG (South Bay Cities Council of Governments). 2015. *City of Carson: Energy Efficiency Climate Action Plan.* Prepared by: Atkins. December 2015. https://www.southbaycities.org/sites/default/files /EECAP_Carson_Final_20151218.pdf.

SBCCG. 2017. Climate Action Plan: City of Carson. December 2017. https://ci.carson.ca.us/content/files/pdfs /planning/CAP.pdf.

SCAG (Southern California Association of Governments). 2020. *The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments*. Connect SoCal. Adopted September 3, 2020. https://scag.ca.gov/sites/main/files/file-attachments /0903fconnectsocal-plan_0.pdf?1606001176.

SCE (Southern California Edison). 2015. Rates & Pricing Choices: General Service/Industrial Rates. October 19, 2015. https://library.sce.com/content/dam/sce-doclib/public/regulatory/tariff/electric/schedules /general-service-&-industrial-rates/ELECTRIC_SCHEDULES_GS-1.pdf.

The Climate Registry. 2019. “Default Emission Factors.” May 2019. Accessed June 2021. https://www.theclimateregistry.org/wp-content/uploads/2019/05/The-Climate-Registry-2019-Default-Emission-Factor-Document.pdf.

Weatherspark. 2022. Climate and Average Weather Year Round at Los Angeles International Airport. https://weatherspark.com/y/145341/Average-Weather-at-Los-Angeles-International-Airport-California-United-States-Year-Round.

4.5 Geology and Soils

This section describes the existing geological conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project). The analysis of the potential Project impacts related to geology and soils is partly based on information provided in a site-specific geotechnical report conducted by Geotechnologies Inc., dated December 2, 2019 and revised January 6, 2021 (Appendix E) and a search by ASM Affiliates, Inc. of paleontological resources records housed at the Natural History Museum of Los Angeles County (NHM), the results of which were received on October 23, 2019 (Appendix C-2, Cultural Resources Evaluation Letter Report).

Information contained in this section is based on the above referenced reports of the Project area and other publicly available information from the United States Geological Survey, the California Geological Survey (CGS), and Southern California Earthquake Data Center. Other sources consulted are listed in Section 4.5.7, References.

4.5.1 Existing Conditions

This section describes the existing conditions in the Project area and identifies the resources that could be affected by the Project.

Regional Geologic Setting

The City of Carson (City) is located within the northerly end of the Peninsular Ranges geomorphic province (CGS 2002). The Peninsular Ranges province extends from the Los Angeles Basin south of the Santa Monica Mountains to the tip of Baja California and includes the San Jacinto and Santa Ana Mountain Ranges, as well as Santa Catalina Island. The Peninsula Ranges province is characterized by elongated northwest-trending mountain ranges separated by straight-sided sediment floored valleys. The northwest trend is further reflected in the direction of the dominant geologic structural features of the province, which are northwest-trending faults and folds created by the boundary of the Pacific and North American tectonic plates. The lateral movement of these plates has created shear zones that have produced the San Andreas fault zone as well as other regional faults. Regional faults in the vicinity of the Project area include the Newport-Inglewood Fault Zone, Paramount Syncline, Dominguez Anticline, Gardena Syncline, Wilmington Anticline, and Wilmington Syncline (CGS 2021).

Topography

Historically, the Project site was fully engulfed within a large slough that was as much as 10 feet below the current grade (Appendix C-1). Reclamation of the greater Project area appears to have taken place sometime prior to 1930, when some known roads appear on historic aerials, including Avalon Boulevard to the east and Grace Avenue to the west, and a channelized slough appears to the northeast of the Project. A review of topographic maps and historic aerials show the slough subject to varying level of reclamation, as a smattering of structures and infrastructure appear on the Project site from the 1930s through the 1960s. The Project site was officially reclaimed in 1972–1973 using recycled materials to fill and level the site and develop road bases for the existing Mobile Home Park. Fill dirt was trucked in from excavation sites and large chunks of concrete from highway improvements and similar projects were brought to the site to be crushed into cement gravel to create the road bases. These activities created a flat and level surface that remains today.

Subsurface Soils

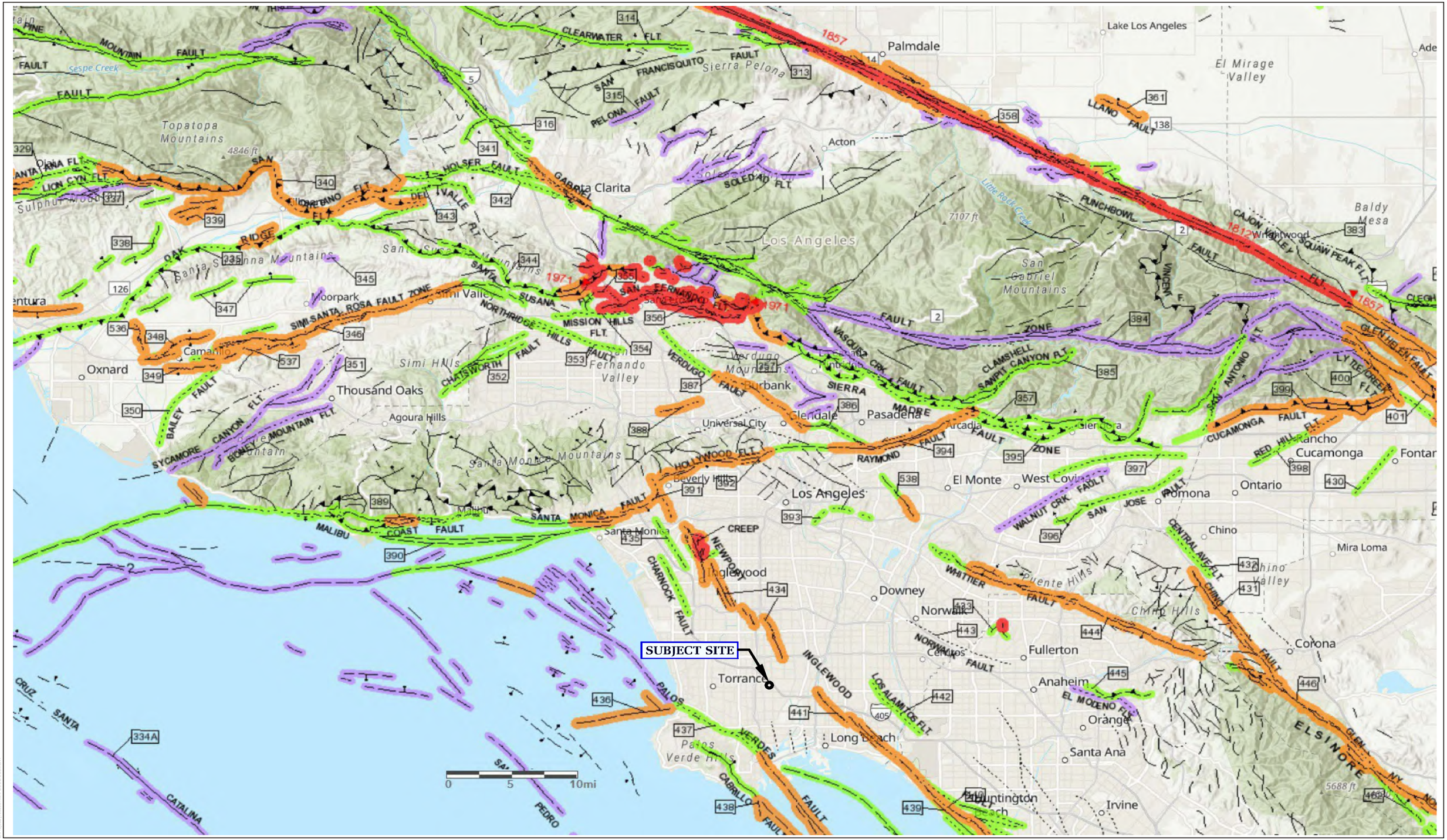
Based on geotechnical borings completed at the Project site as part of a site-specific geotechnical investigation (Appendix E), on-site geologic materials include artificial fill materials overlying native alluvial soils. The fill soils were encountered in all the borings ranging in depths of between 7.5 and 35 feet below ground surface. The artificial fill materials are thought to be associated with the reclamation of the historic slough (Appendix E). The fill materials generally consist of a mixture of clay, slit, and sand, which ranges from yellowish brown to dark brown to gray to dark gray in color, and is moist, stiff, medium dense to dense, and fine grained, with occasional gravel and cobbles. Construction debris, such as bricks, asphalt, and wood are also present in the fill. The underlying alluvial deposits consist of interlayered mixtures of sandy to silty clay, clayey to sandy silt, silty to clayey sand, and sands. The native soils range from yellowish brown to dark brown to gray to dark gray in color, and are moist to wet, stiff to very stiff, medium dense to very dense, and fine to medium grained (Appendix E).

Seismicity and Faulting

The Project site is located in a seismically active region. Several large and well-known faults are located in the Project site region, and movement along those faults, most notably the San Andreas Fault Zone, has greatly influenced landforms and seismicity of the area (Figure 4.5-1, Regional Faulting). The fault closest to the Project area is the Newport-Inglewood Fault, located approximately 1.8 miles to the east of the Project site. Other significant faults in the region include the Palos Verde Fault Zone, the Whittier-Elsinore Fault System, the Santa Monica Fault Zone, the Hollywood Fault, the Raymond Fault, the Malibu Coast Fault, the Verdugo Fault, the Sierra Madre Fault System, the San Gabriel Fault System, the Santa Susana Fault, and the Puente Hills and Elysian Park blind thrusts (Appendix E).

According to criteria established by the California Geological Survey, faults are categorized as follows:

- Holocene-active faults: faults that have shown evidence of displacement within the past approximately 11,700 years (i.e., Holocene time). These faults exhibit signs of geologically recent movement, are considered most likely to experience movement in the near future, and are capable of surface fault rupture. Faults that meet these criteria are known as “active faults.”
- Pre-Holocene faults: faults that have not shown evidence of displacement in the past 11,700 years but are known to have displaced materials between 11,700 and 2 million years ago (i.e., Quaternary time). These faults were once known as “potentially active faults” and may be capable of seismicity (i.e., earthquakes), but are considered unlikely to cause surface rupture.
- Age-undetermined faults: faults where the recency of fault movement has not been determined. These faults are considered “inactive faults.”



SOURCE: California Department of Conservation, 2010 Fault Activity Map

FIGURE 4.5-1

Regional Faulting

Imperial Avalon Mixed-Use Project

DUDEK

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Holocene-active faults have been responsible for large historical earthquakes in Southern California, including the 1971 San Fernando earthquake (moment magnitude[1] [Mw] 6.7), the 1992 Landers earthquake (Mw 7.3), the 2019 Searles Valley earthquake (Mw 7.1), the 1952 Kern County earthquake (Mw 7.5), and the 1933 Long Beach earthquake (Mw 6.4). The moment magnitude is the most commonly used method of describing the size of earthquakes. It measures the size of seismic events in terms of how much energy is released, and it relates to the amount of rock movement. The Southern California region also includes blind thrust faults, which are faults that do not rupture at the surface but are capable of generating substantial earthquakes. Examples include the 1987 Whittier Narrows earthquake (Mw 5.9) and the 1994 Northridge earthquake (Mw 6.7). Both of these earthquakes occurred on previously unidentified blind thrust faults.

Most of the Holocene-active faults in California are recognized as fault zones in accordance with the Alquist-Priolo Earthquake Fault Zoning Act. Fault zones are defined as a region, varying in width but typically approximately one-quarter mile in width, that bounds major fault traces. The Project site is not located within any Alquist-Priolo Earthquake Fault Zone (CGS 2021).

Major active faults within 30 miles of the Project site are listed in Table 4.5-1, Regional Faulting, and are described in the following subsections. Distances from the Project site to individual faults represent the distance to the nearest fault segment within the respective fault zones.

San Andreas Fault

The Holocene-active San Andreas Fault is California's most prominent structural feature, trending in a generally northwest direction for almost the entire length of the state. The southern segment of the fault is approximately 280 miles long, extending from the Mexican border into the Transverse Ranges west of Tejon Pass. Along this segment, there is no single traceable fault line; rather, the fault is composed of several branches (City of Carson 2004). The fault is located approximately 48 miles to the northeast of the Project site and is capable of producing up to a Mw 8.25 earthquake (CGS 2021; CIT 2013).

Newport-Inglewood Fault

The Holocene-active Newport-Inglewood Fault is located approximately 1.8 miles to the east of the Project site and extends from the southern edge of the Santa Monica Mountains southeastward to an area offshore of Newport Beach and possibly offshore beyond San Diego. This zone can be traced at the surface by following a line of relatively young anticlinal (folded) hills and mesas. These hills and mesas include the Cheviot Hills, Baldwin Hills, Rosecrans Hills, Dominguez Hills, Signal Hill-Reservoir, Alamitos Heights, Landing Hill, Bolsa Chica Mesa, Huntington Beach Mesa, and Newport Mesa (Appendix E). Earthquake focal mechanisms for 39 small earthquakes (1977 to 1985) show faulting along the north segment (north of Dominguez Hills) and along the south segment (south of Dominguez Hills to Newport Beach). The 1933 Long Beach earthquake (magnitude 6.3) has been attributed to movement on the Newport-Inglewood Fault Zone. Based on historic earthquakes, the fault zone is considered Holocene-active. Movement along the fault is northeast side up, resulting in vertical displacement of water-bearing sediments extending for several miles. The Newport-Inglewood Fault is capable producing of a maximum probable magnitude Mw 6.0 to 7.5 earthquake (Appendix E; CIT 2013; City of Carson 2004; CGS 2010; CGS 2018).

[1] Moment magnitude (Mw) is considered to be a more reliable estimate of an earthquake's size as compared to the more well-known Richter magnitude (M) scale, however both scales are used in this section, depending on what is used in the reference material.

Palos Verde Fault

The Holocene-active to pre-Holocene Palos Verdes Fault is located approximately 4.9 miles west of the Project site and is traceable in the subsurface along the northern front of the Palos Verdes Hills. Offshore data, consisting of acoustic and reflection profiles, suggests very recent movement along the Palos Verdes Fault. No historic large magnitude earthquakes are associated with this fault; however, it is estimated that this fault is capable of producing a maximum probable magnitude Mw 6.0–7.7 earthquake (Appendix E; City of Carson 2004; CGS 2010; CIT 2013).

Whittier-Elsinore Fault

The Whittier-Elsinore Fault is located approximately 16.5 miles to the east of the Project site. The Whittier Fault together with the Chino Fault comprises the northernmost extension of the northwest trending Elsinore fault system. The mapped surface of the Whittier Fault extends in a west-northwest direction for a distance of 20 miles from the Santa Ana River to the terminus of the Puente Hills. It is estimated that this fault is capable of producing a magnitude Mw 7.8 earthquake (Appendix E).

Raymond Fault

The Raymond Fault is located approximately 19.7 miles to the northeast of the Project site. This fault serves as a groundwater barrier which divides the San Gabriel Valley into groundwater subbasins. Much of the geomorphic evidence of this fault has been destroyed by urbanization. The recurrence interval for this fault is estimated to be approximately 3,000 years, with a documented event occurring 1,600 years ago. Historical accounts also suggest an event occurring in 1855 associated with the Raymond Fault. The Raymond Fault is estimated to be capable of producing a magnitude Mw 6.8 earthquake (Appendix E).

Malibu Coast Fault

The Malibu Coast Fault is part of the Transverse Ranges Southern Boundary fault system, which is a west-trending system of reverse, oblique-slip, and strike-slip faults that extends for more than approximately 124 miles along the southern edge of the Transverse Ranges. This includes the Hollywood, Raymond, Anacapa-Dume, Malibu Coast, Santa Cruz Island, and Santa Rosa Island faults. This fault runs in an east-west orientation along the shoreline for approximately 17 miles through the Malibu City limits and extends offshore for approximately 37.5 miles. The width of the fault varies, up to 1 mile wide. This fault zone has not been officially designated as an active fault by the State of California, and no Special Study Zones have been delineated along any part of the zone under the Alquist-Priolo Act of 1972; however, there is evidence for Holocene activity. This fault is located approximately 19.9 miles northwest of the site and is estimated to be capable of producing a maximum Mw 7.0 earthquake (Appendix E).

Verdugo Fault

The Verdugo Faulty is located approximately 21.2 miles northeast of the Project site and runs along the southwest edge of the Verdugo Mountains. Although considered active by the County of Los Angeles and the U.S. Geological Survey, the fault is not designated with an Earthquake Fault Zone by California Geological Survey. It is estimated that the Verdugo Fault is capable of producing a maximum Mw 6.9 earthquake (Appendix E).

Sierra Madre Fault System

The Sierra Madre Fault System forms the southern tectonic boundary of the San Gabriel Mountains and consists of a system of faults approximately 75 miles in length. The individual segments of the fault system range up to 16 miles in length. The most recently active portions of the system include the Mission Hills, Sylmar, and Lakeview segments, which produced an earthquake in 1971 of magnitude 6.4 M. It is estimated that the Sierra Madre Fault zone is capable of producing an earthquake of magnitude Mw 7.3. The fault zone is located approximately 25.9 miles northeast of the Project site (Appendix E).

Santa Susana Fault

The Santa Susana Fault extends approximately 35.4 miles west-northwest from the northwest edge of the San Fernando Valley into Ventura County and is located at the surface on the south flank of the Santa Susana Mountains. The fault is exposed near the base of the San Gabriel Mountains for approximately 46 miles from the San Fernando Pass east to its intersection with the San Antonio Canyon Fault in the eastern San Gabriel Mountains. This fault has not experienced any recent major ruptures except for a minor one in 1971 associated with the Sylmar earthquake. This fault is considered to be active by the County of Los Angeles and is estimated to have the potential to produce a magnitude Mw 6.9 earthquake. This fault is located approximately 18 miles north of the Project site (Appendix E).

Santa Monica Fault

The Holocene-active Santa Monica Fault is an east–west trending, left-reverse fault that extends approximately 15 miles within the immediate vicinity of Pacific Palisades, Westwood, Beverly Hills, and Santa Monica. The Santa Monica Fault is approximately 18 miles to the north of the Project site and has the capability to generate a maximum probable Mw 6.0 to 7.4 earthquake (Appendix E; City of Carson 2004; CGS 2010; CIT 2013).

Hollywood Fault

The northeast–southwest trending Hollywood Fault (Holocene-active) is a left-reverse lateral strike-slip fault that is deeply buried, is concealed by dense urbanization, and is located approximately 19 miles north of the Project site. This fault trends east-west along the base of the Santa Monica Mountains from the West Beverly Hills Lineament in the West Hollywood-Beverly Hills area to the Los Feliz area of Los Angeles. The Hollywood Fault has not produced any damaging earthquakes during the historical period (i.e., from 1769 to the present) and has had relatively minor micro-seismic activity. It is estimated that the Hollywood Fault is capable of producing a maximum magnitude Mw 6.7 earthquake (Appendix E; CIT 2013; Dolan et al. 1997).

Blind Thrusts Faults

Buried or blind thrusts faults are faults without a surface expression but are significant sources of seismic activity. Due to their buried nature, their existence is sometimes not known until they produce an earthquake. There are two blind thrust faults in the Los Angeles metropolitan region, identified as the Elysian Park blind thrust and the Puente Hills blind thrust. The Puente Hills blind thrust extends eastward from downtown Los Angeles to the City of Brea in northern Orange County (USGS 2017). This fault includes three north-dipping segments, named from east to west as the Coyote Hills segment, the Santa Fe Springs segment, and the Los Angeles segment. The Santa Fe Springs segment is located approximately 8.7 miles to the east of the Project site and is considered to be an active fault capable of generating a magnitude 7.0 M earthquake. The Elysian Park bling thrust fault has been estimated to cause an earthquake every 500 to 1,300 years in the magnitude range of Mw 6.2 to 6.7. This fault is located approximately 15.9 miles to the northeast of the Project site (Appendix E).

Table 4.5-1. Regional Faulting

Regional Faulting	Approximate Closest Distance to Project Site (miles)	Fault Age	Magnitude Potential (Mw)
Newport-Inglewood Fault	1.8	Holocene-active	7.5
Palos Verdes Fault	4.9	Holocene-active to pre-Holocene	7.7
Whittier-Elsinore Fault System	16.5	Holocene-active	7.8
Santa Monica Fault	17.8	Holocene-active	7.4
Hollywood Fault	18.8	Holocene-active	6.7
Raymond Fault	19.7	Holocene-active	6.8
Malibu Coast Fault	19.9	Holocene-active	7.0
Verdugo Fault	21.2	Holocene-active	6.9
Sierra Madre Fault System	25.9	Holocene-active	7.3
Santa Susana Fault	18	Holocene-active	6.9
Puente Hills Blind Thrust System	8.7	Holocene-active	7.0
Elysian Park Fault	15.9	Holocene-active	6.7
San Andreas Fault	48	Holocene-active	8.25

Source: Appendix E; CGS 2010; CIT 2013; BSSA 2002.

Ground Shaking

Ground shaking is the movement of the earth's surface as a result of an earthquake. Ground motion produced by seismic waves emanates from slow or sudden slip on a fault. The degree of ground shaking felt at a given site depends on a number of different factors including the distance from the earthquake source, the magnitude of the earthquake, the type of subsurface material on which the site is situated, duration of shaking and topography. Generally, ground shaking is less severe on rock than on alluvium or fill where the materials under some conditions can amplify ground shaking, but other local characteristics may override this generalization. Ground shaking can produce significant ground horizontal and vertical movement that can result in severe damage to structures that are generally not equipped to withstand it. The Project site is located in the seismically active Southern California region and could be subject to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults.

Detectable ground shaking at the Project site could be observed by a seismic event occurring on any of the active or potentially active faults in the region. The amount of ground shaking would depend on a number of factors including distance and depth to the epicenter. The Newport-Inglewood, Whittier, Santa Monica, and Palos Verdes Faults are the active faults most likely to cause high ground accelerations within the City, as a whole; however, the San Andreas Fault has the highest probability of generating a maximum credible earthquake in California within the next 30 years (USGS 2015).

Surface Rupture

Surface rupture involves the displacement and cracking of the ground surface along a fault trace. Surface ruptures are visible instances of horizontal or vertical displacement, or a combination of the two, typically confined to a narrow zone along the fault. Surface rupture is more likely to occur in conjunction with active fault segments where earthquakes are large, or where the location of the movement (earthquake hypocenter) is shallow.

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 regulates development near Holocene-active faults to mitigate the hazard of surface fault rupture. This act requires the state geologist to establish regulatory zones (known as Alquist-Priolo Special Study Fault Zones) around the surface traces of Holocene-active faults and to issue appropriate maps. Local agencies must regulate most development projects within the zones. Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If a Holocene-active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault.

The Project site is not located within or adjacent to an Alquist-Priolo Earthquake Fault Zone (Appendix E). There are no known Holocene-active or Pre-Holocene faults that underlie the Project site and the closest Alquist-Priolo Fault to the Project site is the Newport-Inglewood Fault, located approximately 1.8 miles to the northeast (Appendix E).

Liquefaction

Liquefaction is a process by which water-saturated cohesionless granular soils below the groundwater table are subject to a temporary loss of strength due to the buildup of excess pore pressure during cyclic loading conditions such as those induced by an earthquake. Materials will then behave more like a liquid than a solid. Liquefaction-related effects include loss of bearing strength, amplified ground oscillations, lateral spreading, and flow failures. Liquefaction typically occurs in areas where groundwater is less than 50 feet from the surface, and where soils are composed of poorly consolidated, fine to medium-grained sand. In addition to the necessary soil conditions, the ground acceleration and duration of the earthquake must also be of sufficient level to initiate liquefaction.

The Newport-Inglewood Fault Zone is a potential source of seismicity that could cause liquefaction if conditions are present (e.g., groundwater table were high enough during the earthquake). Liquefaction can result in the shifting of foundations, settling of roadways, and rupture of underground pipelines and cables. Buildings and other objects on the ground surface can settle, tilt, and collapse as the foundations beneath them lose support, and lightweight buried structures may float to the surface. The Project site is located in an area that has been mapped as a potential liquefaction area (Figure 4.5-2, Seismic Hazards) (Appendix E). Groundwater was encountered in exploratory soil borings at depths between 23.5 feet and 33.5 feet within the Project site. The historic high groundwater in the area was reported at depths of 20 feet below ground surface (bgs) (Appendix E). According to analysis of site-specific soil samples during the preliminary geotechnical investigation of the Project site indicated that sediments underlying the Project site are prone to liquefaction, that could result in soil settlement of up to 2.27 inches (Appendix E).

Lateral Spreading

Lateral spreading (a form of landsliding due to liquefaction) is referred to as limited displacement ground failure, often associated with areas where an exposed slope is present. During lateral spread, blocks of mostly intact, surficial soil displace downslope or towards a free face along a shear zone that has formed within the liquified sediment. Compact surface materials may slide on a liquefied or low shear strength layer at a shallow depth, moving laterally several feet down slopes of less than 2 degrees. Such a condition may be present where conditions conducive to shallow liquefaction exist. However, it was determined that the potential for lateral spread to occur within the Project site is low (Appendix E).

Slope Instability/Landslides

A landslide is the downhill movement of masses of earth material under the force of gravity. The factors contributing to landslide potential are steep slopes, unstable terrain, and proximity to earthquake faults. This process typically involves the surface soil and an upper portion of the underlying bedrock. Movement may be very rapid, or so slow that a change of position can be noted only over a period of weeks or years (creep). The size of a landslide can range from several square feet to several square miles.

The Project site is located in a developed area that is relatively level and is not located near any exposed hillsides. In addition, the Project site is not located with an earthquake-induced landslide zone (CGS 2021). Because of the little to no change in topography of the site, the geotechnical report determined that landslides do not pose a hazard to the Project site (Appendix E).

Subsidence

Subsidence is the permanent collapse of the pore space within a soil or rock and downward settling of the earth's surface relative to its surrounding area. Subsidence can result from the extraction of water or oil, liquefaction, or the addition of water to the land surface—a condition called "hydrocompaction." The compaction of subsurface sediment caused by the withdrawal or addition of fluids can cause subsidence. Land subsidence can disrupt surface drainage, reduce aquifer storage, cause earth fissures, damage buildings and structures, and damage wells, roads, and utility infrastructure.

In general, the greater Los Angeles metropolitan area experiences subsidence due to a variety of natural and human-induced causes including tectonic deformation, oil-field operations, and groundwater extraction and injection. Since these activities occur in overlapping proximity, it has proved difficult to determine the cause of observed deformations using standard surveying techniques (USGS 2021). Human-induced land deformation also produces horizontal surface motion that obscures, or in some cases mimics, the tectonic signals expected from the blind thrust faults beneath Los Angeles. The Dominguez and Wilmington oil fields are located within the City. The historic withdrawal of oil has been known to cause subsidence in portions of the Wilmington oil field, which is located approximately 5 miles to the southwest of the Project site. However, there is no documented ground subsidence associated with the Dominguez oil field. By the early 1980s, subsidence at the oil fields had been mitigated and was no longer occurring (City of Carson 2004).

Expansive Soils

Expansive soils exhibit volumetric changes with changing moisture content where they tend to swell with seasonal increases in soil moisture in the winter months and shrink as soils become drier in the summer months. Repeated shrinking and swelling of expansive soils over time can lead to stress and damage of structures, foundations, and fill slopes and can cause overlying concrete to crack and settle. Soils with a high clay content typically have high shrink/swell characteristics. According to the soil sampling performed during the geotechnical investigation of the Project site, the surficial soils at the Project site were found to vary from low to high expansion potential (Appendix E).

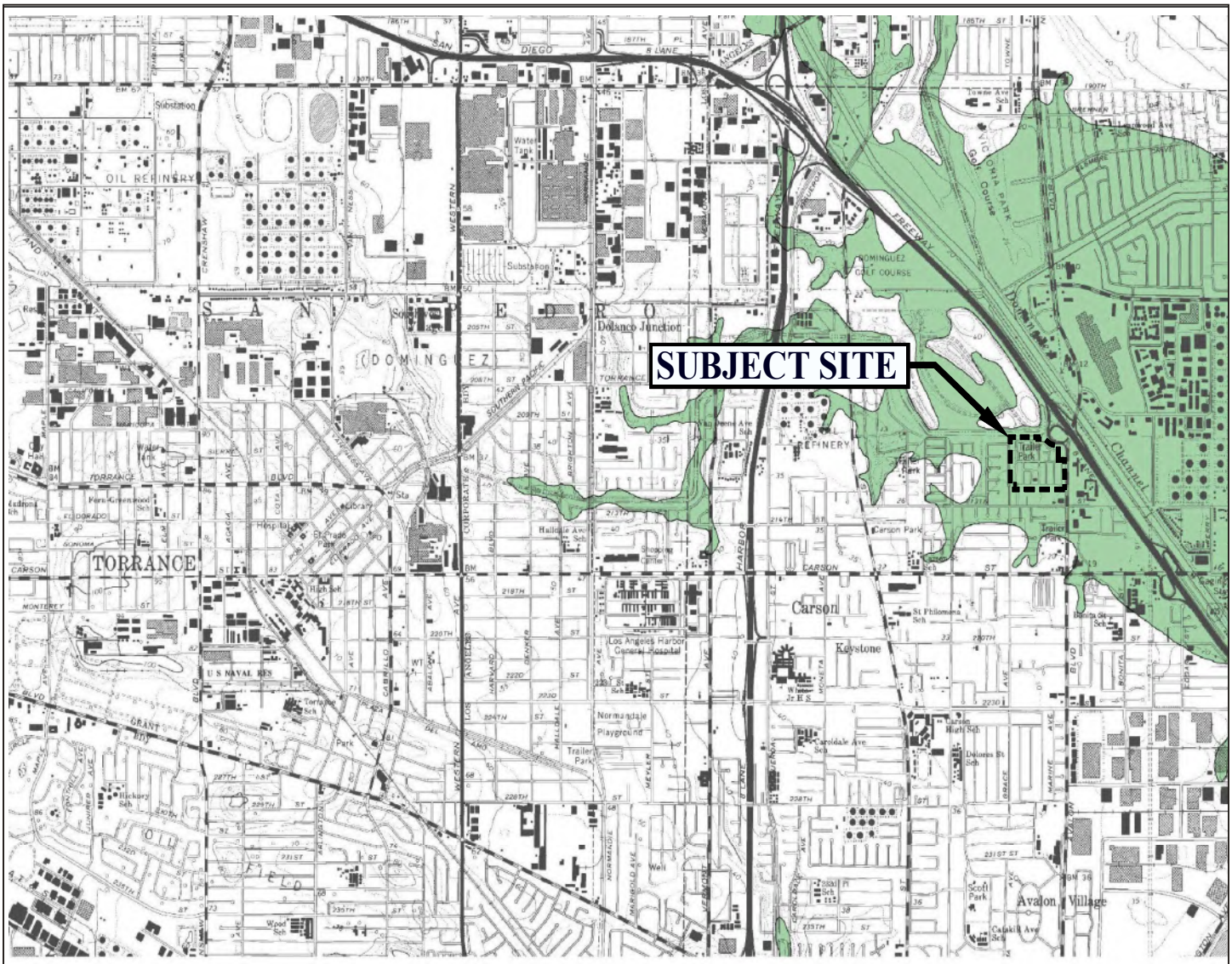


FIGURE 4.5-2
Seismic Hazards
Imperial Avalon Mixed-UseProject

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Paleontological Resources

Paleontological resources, or fossils, are the remains of once living plants and/or animals and their traces (e.g., burrows and tracks) preserved in Earth's crust, and are generally considered to be greater than 5,000 years old or prior to recorded human history per the Society of Vertebrate Paleontology (SVP 2010) guidelines. With the exception of fossils found in low-grade metasedimentary rocks, significant paleontological resources are found in sedimentary rock units that are old enough to preserve the remains or traces of plants and animals.

The Project site is situated within the southwestern block, which lies west the Newport-Inglewood Fault within the of the Los Angeles Basin (Yerkes et al. 1965). The Los Angeles Basin (also called the coastal plain) extends from the Santa Monica Mountains in the north to the San Joaquin Hills of Orange County in the south and is a structural basin that in some areas has been subsiding and filling with sediments since the late Cretaceous (Yerkes et al. 1965). The Los Angeles Basin is characterized by alluvial coastal plains, underlain by older alluvial and marine sediments, and punctuated by uplifted highlands owing to the numerous faults underlying the Basin. These faults, which include the Newport-Inglewood fault zone (a strike-slip fault zone) in the south and the Sierra Madre fault zone in the north (a reverse fault), are part of the greater San Andreas fault system, characterized by numerous strike-slip faults.

As discussed previously, the Project site was completely engulfed by a historical slough. The historical slough does not add to the paleontological sensitivity since it is too young to yield paleontological resources on the surface. However, if the historical slough was around during the early Holocene into the late Pleistocene, it could produce significant paleontological resources at depth. During geotechnical exploratory drillings for the Project (Appendix E) shell fragments were discovered between 12.5 and 65 feet bgs in four borings. These occasional shell fragments were observed in the native soils, and some of the native soils were observed to be diatomaceous (naturally occurring soft sedimentary rock that has been crumbled into a powder) (Appendix E). It is unknown whether these are fossil shell fragments associated with the old lagoonal deposits reported by the NHM or modern shell fragments associated with the buried, modern slough. However, the presence of caliche between 10 and 15 feet bgs in five of the borings could be indicative of Pleistocene age sediments immediately below the layer of artificial fill in some portions of the Project site.

To help inform the understanding of the paleontological sensitivity of individual rock units present within the Project site, ASM Affiliates requested a paleontological records search from the NHM on September 18, 2019 and Dudek conducted desktop geological and paleontological research.

According to the NHM records search results received on October 2, 2019, and surficial geological mapping Dibblee et al. (1999) at a 1:24,000 scale, the majority of the Project is underlain by Holocene (<11,700 years old) alluvium (map unit Qa) with a small area of Pleistocene (approximately 2.58 million years–11,700 years old) alluvium (map unit Qae) in the southwestern-most corner of the Project site. The NHM did report old lagoonal deposits in the northwestern corner of the Project site; however, these deposits are not shown in the geological mapping of Dibblee et al. (1999). While these geological units are mapped on the surface, the geotechnical report for the Project indicated artificial fill depths between 7.5 and 35 feet bgs (Appendix E).

The NHM did not report any previously recorded vertebrate fossil localities within the Project site; however, they did report fossil localities from Pleistocene alluvium near the Project site. The closest vertebrate fossil locality (NHM 1643), northeast of the Project near Annalee Avenue and 190th Streets, yielded a fossil mammoth (*Mammuthus*) at a depth of 8–10 feet bgs. Another fossil mammoth (*Mammuthus*) locality (NHM 1919) was recovered south of the San Diego Freeway (I-405) just west of Wilmington Avenue and south of 223rd Street from

a depth of approximately 10 feet bgs (Appendix C-2). Vertebrate fossil localities NHM 1165, 3319, and 4129, located along Alameda Street between Carson Street and Sepulveda Boulevard, produced a fossil mammoth (*Mammuthus*) from 30 feet bgs, fossil camel (*Camelidae*) from 24 feet bgs, and fossil bison (*Bison*) from an unknown depth. East of the Harbor Freeway (Interstate 110) and near the intersection of Sepulveda Boulevard and Figueroa Street, vertebrate fossil locality 3823 produced a fossil camel (*Camelops*) from between 12 and 14 feet bgs (Appendix C-2).

In addition to the vertebrate fossil localities reported by the NHM, Jefferson (1991) and Miller (1971) reported numerous Pleistocene fossil vertebrate localities in this portion of the Los Angeles Basin. Specimens include amphibians, reptiles, birds, and large and small mammals.

4.5.2 Relevant Plans, Policies, and Ordinances

Federal

The following federal regulations pertaining to seismicity and geologic hazards would apply to the Project.

Earthquake Hazards Reduction Act

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program. To accomplish this goal, the act established the National Earthquake Hazards Reduction Program. This program was substantially amended in November 1990 by the National Earthquake Hazards Reduction Program Act, which refined the description of agency responsibilities, program goals, and objectives.

The mission of National Earthquake Hazards Reduction Program includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land-use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The National Earthquake Hazards Reduction Program Act designates the Federal Emergency Management Agency as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities. Other National Earthquake Hazards Reduction Program Act agencies include the National Institute of Standards and Technology, National Science Foundation, and the U.S. Geological Survey.

State

The following state regulations pertaining to seismicity and geologic hazards would apply to the Project.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC Sections 2690–2699.6) addresses earthquake hazards from non-surface fault rupture, including liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. Under the Seismic Hazards Mapping Act, the State Geologist is required to delineate "seismic hazard zones." Cities and counties must regulate certain development projects within these zones until the geologic and soil conditions of their project sites have been investigated and appropriate mitigation measures, if any, have

been incorporated into development plans. Under California Public Resources Code Section 2697, cities and counties must require, prior to the approval of a project located in a seismic hazard zone, submission of a Preliminary Geotechnical Report defining and delineating any seismic hazard. State publications supporting the requirements of the Seismic Hazards Mapping Act include the CGS SP 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California (CGS 2008), discussed previously, and SP 118, Recommended Criteria for Delineating Seismic Hazard Zones in California (CGS 1992). SP 117A provides guidelines to assist in the evaluation and mitigation of earthquake-related hazards for projects within designated zones requiring investigations and to promote uniform and effective Statewide implementation of the evaluation and mitigation elements of the Seismic Hazards Mapping Act.2 SP 118 provides recommendations to assist the CGS in carrying out the requirements of the Seismic Hazards Mapping Act to produce the Probabilistic Seismic Hazard Maps for the State. The Project site is located within a seismic hazard zone for liquefaction and must conform to the requirements of the Seismic Hazards Mapping Act.

National Pollutant Discharge Elimination System Permit

In California, the State Water Resources Control Board administers regulations promulgated by the U.S. Environmental Protection Agency (55 CFR 47990), requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Elimination System (NPDES). In turn, the State Water Resources Control Board's jurisdiction is administered through nine Regional Water Quality Control Boards. Under these federal regulations, an operator must obtain a general permit through the NPDES Stormwater Program for all construction activities with ground disturbance of 1 acre or more. The general permit requires the implementation of best management practices (BMPs) to reduce sedimentation into surface waters and to control erosion. One element of compliance with the NPDES permit is preparation of a Stormwater Pollution Prevention Plan (SWPPP) that addresses control of water pollution, including sediment, in runoff during construction.

California Building Code

The state regulations protecting structures from geo-seismic hazards are contained in the California Code of Regulations (CCR), Title 24, Part 2 (the California Building Code [CBC]), which is updated every 3 years. These regulations apply to public and private buildings in the state and establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability. The CBC is based on the International Building Code of the International Code Council, with California amendments. The 2019 CBC, which became effective January 1, 2020, is based on the 2018 International Building Code and enhances the sections dealing with existing structures. Seismic-resistant construction design is required to meet more stringent technical standards than those set by previous versions of the CBC.

Construction activities are subject to occupational safety standards for excavation and trenching, as specified in the California Safety and Health Administration regulations (Title 8 of the CCR) and in Chapter 33 of the CBC. These regulations specify the measures to be used for excavation and trench work where workers could be exposed to unstable soil conditions. Pacific Gas & Electric would be required to employ these safety measures during excavation and trenching for implementation of operations and maintenance activities.

2 Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California, prepared by California Geologic Survey, 2008, http://www.conservation.ca.gov/cgs/shzp/webdocs/Documents/sp117.pdf.

Paleontological Resources

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under state laws and regulations (California Environmental Quality Act [CEQA]). This report satisfies Project requirements in accordance with CEQA (PRC Section 21000 et seq. and PRC Section 5097.5). This analysis also complies with guidelines and significance criteria specified by the Society of Vertebrate Paleontology (SVP 2010).

Paleontological resources are explicitly afforded protection by CEQA, specifically in Section VII(f) of CEQA Guidelines Appendix G, the Environmental Checklist Form, which addresses the potential for adverse impacts to "unique paleontological resource[s] or site[s] or … unique geological feature[s]" (14 CCR 15000 et seq.). This provision covers fossils of signal importance—remains of species or genera new to science, for example, or fossils exhibiting features not previously recognized for a given animal group—as well as localities that yield fossils significant in their abundance, diversity, preservation, and so forth. Further, CEQA provides that, generally, a resource shall be considered "historically significant" if it has yielded or may be likely to yield information important in prehistory (14 CCR 15064.5 [a][3][D]). Paleontological resources would fall within this category. The California Public Resources Code, Chapter 1.7, Sections 5097.5 and 30244, also regulates removal of paleontological resources from state lands, defines unauthorized removal of fossil resources as a misdemeanor, and requires mitigation of disturbed sites.

Local

The following local/regional regulations pertaining to seismicity and geologic hazards would apply to the Project.

General Plan

In October 2004 the City adopted the Safety Element chapter of the General Plan. The Safety Element identifies the primary geologic hazards in the City with respect to the development of critical structures and structures for human occupancy in relation to those hazards. This public safety element aims to mitigate and minimize potential hazards caused by fault ground rupture, liquefaction, subsidence, flooding, and slope failure. To achieve these goals, the Safety Element contained the following policies:

Goal: SAF-1: Minimize the risk of injury, loss of life, and property damage caused by earthquake hazards.

Policies: SAF-1.1: Continue to require all new development to comply with the most recent City Building Code seismic design standards.

SAF-1.2: Work with the City's Public Information Office and Public Safety Division to:

- Educate residents in earthquake safety at home,
- Educate the public in self-sufficiency practices necessary after a major earthquake (e.g., alternative water sources, food storage, first aid, family disaster plans, and the like), and
- Identify locations where information is available to the public for planning self-sufficiency.

SAF-1: Examine the potential to create a commercial loan program to subsidize the cost of retrofitting buildings to meet seismic safety regulations. To this end, pursue all sources of state and federal funding in order to retrofit buildings to meet seismic requirements

Goal: SAF-3: Minimize the effects of natural and urban disasters to reduce, to the extent possible, the social and economic impacts that these may have on the community.

Policies: SAF-3.1: Continue to ensure that each development or neighborhood in the City has adequate emergency ingress and egress.

SAF-3.2: Maintain and update, as necessary, the SEMS Multi-Hazard Functional Plan which identifies emergency response and recovery actions in the event of an incident.

SAF-3.5: Support legislation and tax measures that tie disaster insurance and tax rates to hazard reduction measures.

Similar to the Safety Element portion of the General Plan, the Open Space/Conservation chapter includes the following geology and soils related policy:

OSC-2.3: Minimize soil erosion and siltation from construction activities through monitoring and regulation.

4.5.3 Thresholds of Significance

The significance criteria used to evaluate Project impacts to geology and soils are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to geology and soils would occur if the Project would:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
   a. 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 based on other substantial evidence of as known fault. Refer to Division of Mines and Geology Special Publication 42.
   b. Strong seismic ground shaking.
   c. Seismic-related ground failure, including liquefaction.
   d. Landslides.
2. Result in substantial soil erosion or the loss of topsoil.
3. 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.
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
5. 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.
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
7. Result in cumulatively considerable impacts to geology and soils or to paleontological resources.

4.5.4 Impacts Analysis

Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

a. 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 based on other substantial evidence of as known fault. Refer to Division of Mines and Geology Special Publication 42.

No Impact. The Project site is not located within an Alquist-Priolo Earthquake Fault Zone. The closest such zone is located along the Newport-Inglewood Fault Zone, approximately 1.8 miles to the east of the Project site. In addition, no known faults traverse the Project site. Furthermore, development of the proposed Project would not directly or indirectly cause or exacerbate existing fault rupture risks. As a result, no impacts related to surface rupture of a known earthquake fault would occur.

b. Strong seismic ground shaking?

Less-than-Significant Impact. The Project site is located in the seismically active region of Southern California. The Holocene-active Newport-Inglewood Fault Zone is located relatively close (1.8 miles to the east) to the Project site. This fault, as well as numerous other regional faults (e.g., San Andreas, Palos Verde, Elysian Park Faults), are capable of producing moderate to large seismic events (i.e., earthquakes) that could adversely affect the Project site, if not constructed appropriately. However, proposed Project construction would be completed in accordance with current CBC requirements which include seismic design criteria. The CBC provides procedures for earthquake-resistant structural design that includes considerations for on-site soil conditions, occupancy, and the configuration of the structure, including the structural system and height. Although substantial damage to structures may be unavoidable during large earthquakes, the proposed structures would be designed to resist structural collapse and thereby provide reasonable protection from serious injury, catastrophic property damage, and loss of life.

Chapters 18 and 18A of the CBC include (but are not limited to) the requirements for foundation and soil investigations (Sections 1803 and 1803A); excavation, grading, and fill (Sections 1804 and 1804A); damp-proofing and water-proofing (Sections 1805 and 1805A); allowable load-bearing values of soils (Sections 1806 and 1806A); the design of foundation walls, retaining walls, embedded posts and poles (Sections 1807 and 1807A), and foundations (Sections 1808 and 1808A); and design of shallow foundations (Sections 1809 and 1809A) and deep foundations (Sections 1810 and 1810A). In conjunction with City policies aimed at mitigating and minimizing geologic hazards, the proposed Project would not directly or indirectly cause substantial adverse effects involving strong seismic ground shaking. Impacts would be **less than significant**.

c. Seismic-related ground failure, including liquefaction?

Less-than-Significant Impact. As discussed previously, according to mapping compiled by the CGS, the Project site is located in a seismic hazard zone for liquefaction. The preliminary geotechnical investigation confirmed that the Project site is underlain by soils that could be susceptible to liquefaction during a seismic event. Hazards associated with soil liquefaction and seismic-related ground failure include temporary loss of soil bearing capacity, lateral spreading, differential compaction, and slope instability. Liquefaction of on-site soils may settle on an order of over 2 inches due to ground shaking (Appendix E).

However, all proposed development within the Project site would be required to adhere to requirements of the CBC and Special Publication 117A for the mitigation of liquefaction hazards. As part of adherence to these building code requirements, Project designs would require geotechnical engineering measures such as site preparation (e.g., treatment of liquefiable layers or use of engineered fills) and foundation design that would minimize damage from the effects of liquefaction at the Project site. In addition, development of the Project site would not increase or exacerbate the potential for liquefaction to occur and therefore would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismically related ground failure, including liquefaction. Impacts would be **less than significant**.

d. Landslides?

Less-than-Significant Impact. As previously discussed, the Project site is relatively level and not located near any exposed hillsides with little to no exposure to potential landslides or slope instabilities. Based on these factors and the relatively flat topography, the site-specific geotechnical report determined that landslides do not pose a significant hazard to the proposed Project. Regardless, grading and construction would be completed in compliance with CBC regulations and compliance with City ordinances related to grading, thus also reducing the potential for any slope instability to occur. Finally, the Project site would not exacerbate the potential for on- or off-site landslides. As such, implementation of the Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. Impacts are considered **less than significant**.

Would the Project result in substantial soil erosion or the loss of topsoil?

Construction

Less-than-Significant Impact. Project construction would entail demolition of existing improvements, grading of the entire Project site, followed by construction of the proposed structures. These construction activities would include earthwork activities that could expose soils to the effects of wind and water erosion, if not conducted appropriately. However, existing State and federal NPDES Construction General Permit requirements include the preparation and implementation of a SWPPP for projects with ground disturbance in excess of 1 acre. In compliance with Construction General Permit requirements, the SWPPP would establish erosion and sediment control BMPs for all applicable construction activities. Typical examples of erosion-related construction BMPs include the following:

- Silt fences and/or fiber rolls installed along with the limits of work and/or the Project construction site
- Stockpile containment and exposed soil stabilization structures (e.g., Visqueen plastic sheeting, fiber rolls, gravel bags and/or hydroseed)
- Runoff control devices (e.g., fiber rolls, gravel bag barriers/chevrons, etc.) used during construction phases conducted during the rainy season
- Wind erosion (dust) controls
- Tracking controls at the site entrance, including regular street sweeping and tire washes for equipment
- Regular inspections and maintenance of BMPs

These BMPs would be refined and/or added to as necessary by a qualified SWPPP professional to meet the performance standards required by the Construction General Permit.

In addition, development activities would comply with City grading and erosion control standards to minimize soil erosion. Compliance with the Construction General Permit and City grading requirements would ensure that soil erosion or loss of topsoil impacts during construction would be minimized. As such, impacts would be **less than significant.**

Operations

Less-than-Significant Impact. Long-term operation of the Project would not result in substantial soil erosion or loss of topsoil as the majority of the Project site would be covered by the proposed structures, impervious surfaces (e.g., walkways and roadways), while the remaining portions of the site would be covered with irrigated landscaping. All proposed improvements would also be required to adhere to drainage control requirements such that there would be negligible exposed areas that could be susceptible to erosion. In addition, the majority of the area surrounding the Project site is completely developed and would not be susceptible to indirect erosional processes (e.g., uncontrolled runoff) caused by the Project. With the implementation of applicable post-construction BMPs and drainage control requirements, impacts related to erosion or loss of topsoil during Project operation would be **less than significant**.

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?

Less-than-Significant Impact. As previously described for significance threshold 1(c) and 1(d), the Project site would not increase the potential for landslide, liquefaction, and lateral spreading to occur. All proposed improvements would be required to adhere to the CBC and City building code requirements which would address these geotechnical hazards, if present. Therefore, potential impacts associated with these hazards would be **less than significant**.

Subsidence

Less-than-Significant Impact. With respect to subsidence, portions of the City have historically been prone to subsidence owing to some combination of oil and groundwater withdrawal as well as tectonic activity. However, Project construction and operation would not exacerbate the potential for subsidence to occur. Although groundwater dewatering may be required during construction, the relative amount of groundwater extracted would be minimal and temporary, such that there would negligible effects related to subsidence. Therefore, potential impacts associated with subsidence would be **less than significant**.

Collapsible Soils

Less-than-Significant Impact. Regarding collapsible soils, artificial fill and young alluvial fan sediments underlie the Project site. The undocumented artificial fill consists of a mixture of clay, silt, and sand, which was observed to be stiff to medium dense. The fill material is then underlain by alluvial deposits consisting of interlayered mixtures of sandy to silty clay, clayey to sandy silt, clayey sand, and sands (Appendix E). These alluvial deposits were reportedly stiff, medium dense to dense, and fine grained, with occasional gravel and cobbles (Appendix E). Proposed grading would consist of over-excavation of loose, unconsolidated materials until such a depth that competent material is encountered. The excavated area would then typically be backfilled with compacted soil until the finished grade is achieved.

In addition, structures to be built under the Project would be constructed in compliance with CBC requirements, including allowable load-bearing values of soils (Sections 1806 and 1806A); the design of embedded posts and poles (Sections 1807 and 1807A), and foundations (Sections 1808 and 1808A); and design of deep foundations (Sections 1810 and 1810A), as applicable, which are designed to assure safe construction requirements appropriate to site conditions. Therefore, based on existing site conditions and adherence to building code requirements, potential impacts associated with collapsible soils would be **less than significant**.

Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less-than-Significant Impact. Expansive soils are clay-rich soils that shrink when dry and swell when wet. This change in volume can exert substantial pressure on foundations, resulting in structural distress and/or damage. Limited laboratory testing of on-site soils indicate that surficial soils are considered moderate to highly expansive (Appendix E). However, Project construction would be completed in compliance with the CBC and City building codes, which include requirements to address expansive soil hazards. Typical measures described in Chapter 18 of the CBC to alleviate expansive soils include the following:

- Excavation of expansive soils until such a depth that competent material is encountered
- Installation of foundations designed to resist forces exerted on the foundation due by expansive soils
- Stabilization of the soils by chemical, dewatering, pre-saturation, or equivalent techniques

Project construction would not increase or exacerbate the potential for expansive soils to create substantial direct or indirect risk of the property. As such, impacts associated with expansive soils would be **less than significant**.

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?

No Impact. The Project site is currently served by sewer infrastructure, and any new development would require sewer connections. The Project site area is located in an urbanized area that is currently connected to sewer lines. No septic tanks or alternative wastewater disposal is proposed; therefore, implementation of the Project would result **no impact**.

Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less-than-Significant Impact with Mitigation Incorporated. The institutional records search and the desktop geological and paleontological review did not reveal any fossil localities within the Project site, and the Project site is not anticipated to be underlain by unique geologic features. The Project site is underlain by variable thicknesses of artificial fill, Holocene alluvium, and Pleistocene alluvium, and lagoonal deposits. The artificial fill, which ranges from 7 to 35 feet bgs according to geotechnical borings, has no paleontological sensitivity. Holocene alluvium, which is likely present immediately below the fill in areas where no caliche or shell fragments were recovered during exploratory geotechnical borings, has low paleontological sensitivity on the surface, but increases with depth. Pleistocene alluvium and lagoonal deposits, which are likely below the fill areas in which caliche and/or shell fragments were recovered during exploratory geotechnical borings, have high paleontological sensitivity. Given the paleontological sensitivity of deeper Holocene alluvium and Pleistocene alluvium/lagoonal deposits; the presence of shells, caliche and possible diatomaceous earth found within the geotechnical borings for the Project; and the nearby Pleistocene fossil mammal localities reported by the NHM, intact paleontological resources may be present below artificial fill and the Holocene alluvial sediments where older, Pleistocene,

sediments are anticipated and in areas immediately underlain by Pleistocene alluvium or lagoonal deposits. If intact paleontological resources are located on site, ground-disturbing activities associated with construction of the Project, such as grading and excavation during site preparation, has the potential to destroy a unique paleontological resource, if present on-site. As such, the Project site is considered to be potentially sensitive for paleontological resources and without mitigation, the potential damage to paleontological resources during construction associated with the Project is considered a potentially significant impact. As such, implementation of Mitigation Measure **(MM)-PALEO-1,** which stipulates the preparation of a Paleontological Resources Impact Mitigation Program (PRIMP), is required to help ensure that, in the event of an unanticipated find of a significant paleontological resource, such as identifiable invertebrate and vertebrate fossils, the resource is protected, researched, and potentially preserved (if subsequently deemed warranted) to maintain integrity and significance. The PRIMP will guide a monitoring program that will be executed by a qualified paleontologist and will contain information regarding preconstruction meeting attendance, worker environmental awareness training, procedures for adequate monitoring, salvaging of fossils and associated critical data, and curation with an accredited paleontological repository with retrievable storage. With implementation of **MM-PALEO-1**, Project impacts are considered **less than significant with mitigation incorporated**.

Would the Project have cumulatively considerable impacts with regards to geology, soils, paleontological resources, or unique geologic features?

Geology and Soils

Less-than-Significant Impact. The geographic scope for cumulative analysis is the Los Angeles Basin, which includes a wide range of underlying conditions (i.e., soils, bedrock types, and gradients) that also vary in proximity to active faults and seismic hazards. Impacts related to geology and soils tend to be site specific because conditions, including site geotechnical hazards, can vary greatly over short distances. As a result, impacts tend to be localized and do not combine to become cumulatively considerable. Current and future cumulative development projects, just as with the proposed Project, would be required to adhere to CBC building code requirements which reduce the potential for adverse effects related to geotechnical and seismic hazards. Therefore, with adherence to building code requirements, the impacts related to geology and soils would not be cumulatively considerable and considered **less than significant**.

Paleontological Resources

Less-than-Significant Impact with Mitigation Incorporated. The geographic scope of the cumulative paleontological resources analysis is the region surrounding the Project site, which is located in a predominantly developed area. Cumulative impacts to paleontological resources evaluate whether the impacts of the Project and other related cumulative projects, when taken as a whole, substantially diminish the number of paleontological resources within the same or similar context or property type. Ongoing development and growth in the broader Project area may result in a cumulatively significant impact to paleontological resources due to the continuing disturbance of deeper (i.e., for subterranean disturbances) subsurface soils, which could potentially contain significant buried paleontological resources. As a result, **MM-PALEO-1** is required to help ensure that, in the event of an unanticipated find of a significant paleontological resource, the resource is protected, researched, and potentially preserved (if subsequently deemed warranted) to maintain integrity and significance.

It is anticipated that paleontological resources that are potentially affected by cumulative projects would also be subject to the same requirements of CEQA as the Project and mitigate for their impacts, if applicable. The determinations of significance would be made on a case-by-case basis, and the effects of cumulative development on

paleontological resources would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. Therefore, with implementation of **MM-PALEO-1**, the Project would not contribute to a cumulatively considerable impact associated with paleontological resources, and impacts are considered **less than significant with mitigation incorporated**.

4.5.5 Mitigation Measures

The following mitigation measure would reduce potentially significant geology and soil impacts of the proposed Project related to paleontological resources, identified in Impact GEO-4 above, to a less-than-significant level.

MM-PALEO-1 **Paleontological Resources Impact Mitigation Program and Paleontological Monitoring.** Prior to commencement of any grading activity on site, the applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the Proposed Project. The PRIMP shall be consistent with the SVP (2010) guidelines and outline requirements for preconstruction meeting attendance and worker environmental awareness training, where paleontological monitoring is required within the Project site based on construction plans and geotechnical reports, procedures for adequate paleontological monitoring and discoveries treatment, and paleontological methods (including sediment sampling for microinvertebrate and microvertebrate fossils), reporting, and collections management. The qualified paleontologist shall attend the preconstruction meeting and a qualified paleontological monitor shall be on site during all rough grading and other significant ground-disturbing activities (including augering) in previously undisturbed Pleistocene deposits as stated in the PRIMP. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will allow grading to recommence in the area of the find.

4.5.6 Level of Significance After Mitigation

The Project would result in potentially significant impacts associated with the destruction of a unique paleontological resource or site or unique geologic feature. With incorporation of MM-PALEO-1, impacts associated with paleontological resources would be less than significant with mitigation incorporated.

4.5.7 References

BSSA (Bulletin of the Seismological Society of America) 2002. Puente Hills Blind-Thrust System, Los Angeles, California. December 2002. Accessed on January 2022. http://activetectonics.asu.edu/bidart/bibliography/bssa/bssa_92_8/shaw_plesch_dolan_pratt_fiore_2002.pdf.

CGS (California Geological Survey). 2004. *Special Publication 118: Recommended Criteria for Delineating Seismic Hazard Zones in California*. Published May 1992, Revised April 2004. Accessed January 2022. http://www.conservation.ca.gov/cgs/shzp/webdocs/Documents/sp118_revised.pdf.

CGS. 2002. California Geomorphic Provinces: Note 36. 4 pp. Accessed January 2022. https://www.conservation.ca.gov/cgs/Documents/Publications/CGS-Notes/CGS-Note-36.pdf.

CGS. 2008. *Special Publication 117A: Guidelines for Evaluating and Mitigating Seismic Hazards in California*. Accessed January 2022. http://www.conservation.ca.gov/cgs/shzp/webdocs/Documents/sp117.pdf.

CGS. 2018. Earthquake Fault Zones: A Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California. Special Publication 42, Revised 2018. Accessed January 2022. https://www.conservation.ca.gov/cgs/Documents /Publications/Special-Publications/SP_042.pdf.

CGS. 2021. "Fault Activity Map of California." Interactive map. Accessed on January 2022. http://maps.conservation.ca.gov/cgs/fam/.

CIT (California Institute of Technology). 2013. "Southern California Earthquake Data Center: Earthquake Information." Fault Name Index. Accessed January 2022. http://scedc.caltech.edu/significant/fault-index.html#a.

City of Carson. 2004. *Carson General Plan, Chapter 6 Safety Element*, Accessed January 2022. http://ci.carson.ca.us/content/files/pdfs/planning/generalplan/Chapter%206_Safety.pdf.

Dibblee, T.W. H.E. Ehrenspeck, P.L. Ehlig, and W.L. Bartlett. 1999. Geologic map of the Palos Verdes Peninsula and vicinity, Redondo Beach, Torrance, and San Pedro quadrangles, Los Angeles County, California: Dibblee Geological Foundation, Dibblee Foundation Map DF-70, scale 1:24,000.

Dolan, J.E., K. Sieh, T.K. Rockwell, P. Guptill, and G. Miller. 1997. *Active Tectonics, Paleoseismology, and Seismic Hazards of the Hollywood Fault, Northern Los Angeles Basin, California*. December 1997. Geological Society of America Bulletin, V. 109, no. 12, p. 1595–1616.

Jefferson, G.T. 1991. *A Catalog of Late Quaternary Vertebrates from California*. Natural History Museum of Los Angeles County, Technical Reports 7:1-174. Unpublished revision. May 18, 2012.

Miller, W.E. 1971. "Pleistocene Vertebrates of the Los Angeles Basin and Vicinity (Exclusive of Rancho la Brea)." *Los County Museum of Natural History Science Bulletin* 10:1–124.

SVP (Society of Vertebrate Paleontology). 2010. "Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources." https://vertpaleo.org/wp-content/uploads /2021/01/SVP_Impact_Mitigation_Guidelines.pdf.

USGS (U.S. Geological Survey). 2015. "UCERF3: A New Earthquake Forecast For California's Complex Fault System." Fact Sheet 2015-3009, March 2015. Accessed January 2022. https://pubs.usgs.gov /fs/2015/3009/pdf/fs2015-3009.pdf.

USGS. 2017. "Quaternary Fault and Fold Database of the United States – Puente Hills Blind Thrust System, Los Angeles Section (Class A) No. 185a." Accessed January 2022. https://earthquake.usgs.gov/cfusion /qfault/show_report_AB_archive.cfm?fault_id=185&section_id=a.

USGS. 2021. "Areas of Land Subsidence in California". Interactive map. Accessed January 2022. https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html.

Yerkes, R.F., T.H. McCulloh, J.E. Schoellhamer, and J.G. Vedder, 1965. *Geology of the Los Angeles Basin California—an Introduction*. Geological Survey Professional Paper 420-A. 57 pp. https://pubs.usgs.gov/pp/0420a/report.pdf.

4.6 Greenhouse Gas Emissions

This section describes the existing greenhouse gas (GHG) conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project).

Information contained in this section is based on Appendix F, Greenhouse Gas Assessment, of the Project area conducted by Michael Baker International on August 13, 2021. Other sources consulted are listed in Section 4.6.7, References.

4.6.1 Existing Conditions

Greenhouse Gases and Climate Change

Certain gases in Earth's atmosphere classified as GHGs play a critical role in determining Earth's surface temperature. Solar radiation enters the Earth's atmosphere from space. A portion of the radiation is absorbed by the Earth's surface and a smaller portion of this radiation is reflected toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the Earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on Earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of GHGs exceeding natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the Earth's climate, known as global climate change or global warming.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of a GHG molecule is dependent on multiple variables and cannot be pinpointed, more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO_2 emissions, approximately 55% is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45% of human-caused CO_2 emissions remains stored in the atmosphere (IPCC 2013). Table 4.6-1 describes the primary GHGs attributed to global climate change, including their physical properties.

Table 4.6-1. Description of Greenhouse Gases

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	CO_2 is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO_2 is variable because it is readily exchanged in the atmosphere. CO_2 is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other greenhouse gases (GHGs).
Nitrous Oxide (N_2O)	N_2O is largely attributable to agricultural practices and soil management. Primary human-related sources of N_2O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N_2O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years. The Global Warming Potential of N_2O is 298.
Methane (CH_4)	CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is the major component of natural gas, approximately 87% by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH_4 include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH_4 is approximately 12 years and the Global Warming Potential is 25.
Hydrofluorocarbons (HFCs)	HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of CFCs and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and only break down by ultraviolet rays approximately 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Global Warming Potentials range from 6,500 to 9,200.
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. Global Warming Potentials for CFCs range from 3,800 to 14,400.
Sulfur Hexafluoride (SF_6)	SF_6 is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas. The Global Warming Potential of SF_6 is 23,900.
Hydro-chlorofluorocarbons (HCFCs)	HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, HCFCs are subject to a consumption cap and gradual phase out. The United States is scheduled to achieve a 100% reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.

Table 4.6-1. Description of Greenhouse Gases

Greenhouse Gas	Description
Nitrogen Trifluoride (NF_3)	NF_3 was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. This gas is used in electronics manufacture for semiconductors and liquid crystal displays. It has a high global warming potential of 17,200.

Sources: EPA 2010, 2018a, 2018b; IPCC 2007; National Research Council 2010.

4.6.2 Relevant Plans, Policies, and Ordinances

Federal

To date, national standards have not been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

U.S. Environmental Protection Agency Endangerment Finding

The authority of the U.S. Environmental Protection Agency (EPA) to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing federal Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an endangerment finding in December 2009. Based on scientific evidence, it found that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare. Therefore, it is the Supreme Court's interpretation of the existing federal Clean Air Act and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

State

California Air Resources Board

The California Air Resources Board (CARB) is responsible for the coordination and oversight of state and local air pollution control programs in California. Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of CO_2 equivalents (CO_2e) in the world and produced 459 million gross metric tons of CO_2e in 2013. In California, the transportation sector is the largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction.

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark Assembly Bill (AB) 32, California Global Warming Solutions Act of 2006, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance energy standards, were originally adopted for other purposes such as energy and water conservation but also provide GHG reductions. This section describes the major provisions of the legislation related to GHG emissions reduction.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

AB 32 instructs the CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. AB 32 also directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. It set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

CARB Scoping Plan

CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that would be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29% below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business-as-usual").[1] The Scoping Plan evaluates opportunities for sector-specific reductions, integrates early actions and additional GHG reduction measures by both CARB and the state's Climate Action Team, identifies additional measures to be pursued as regulations, and outlines the adopted role of a cap-and-trade program.[2] Additional development of these measures and adoption of the appropriate regulations occurred through the end of 2013. Key elements of the Scoping Plan include the following:

- Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards.
- Achieving a statewide renewables energy mix of 33% by 2020.
- Developing a California cap-and-trade program that links with other programs to create a regional market system and caps sources contributing 85% of California's GHG emissions (adopted in 2011).
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several sustainable community strategies have been adopted).
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, heavy-duty truck measures, the Low Carbon Fuel Standard (amendments to the Pavley Standard adopted 2009; Advanced Clean Car standard adopted 2012), and goods movement measures.
- Creating targeted fees, including a public goods charge on water use, fees on gasses with high global warming potential, and a fee to fund the administrative costs of California's long-term commitment to AB 32 implementation.

In 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relied on emissions projections updated considering current economic forecasts that accounted for the economic downturn since 2008, reduction measures already approved and put in place relating to future fuel and energy demand, and other factors. This update reduced the projected 2020 emissions from 596 million metric tons of CO_2e to 545 million metric tons of CO_2e. The reduction in forecasted 2020 emissions means that the revised business-as-usual reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now 21.7%, down from 29%. CARB also provided a lower 2020 inventory forecast that incorporated state-led GHG emissions

[1] CARB defines business-as-usual in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of business-as-usual, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

[2] The Climate Action Team, led by the secretary of the California Environmental Protection Agency, is a group of state agency secretaries and heads of agencies, boards, and departments. Team members work to coordinate statewide efforts to implement global warming emissions reduction programs and the state's Climate Adaptation Strategy.

reduction measures already in place. When this lower forecast is considered, the necessary reduction from business-as-usual needed to achieve the goals of AB 32 is approximately 16%.

CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG emissions reductions necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32.

In January 2017, CARB released the 2017 Climate Change Scoping Plan Update (Second Update) for public review and comment (CARB 2017). The Second Update sets forth CARB's strategy for achieving the state's 2030 GHG target as established in Senate Bill (SB) 32 (discussed herein). The Second Update was approved by CARB's Governing Board on December 14, 2017 (CARB 2017).

Senate Bill 32 (California Global Warming Solutions Act of 2006: Emissions Limit)

Signed into law in September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40% below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

With SB 32, the Legislature passed companion legislation, AB 197, which provides additional direction for developing the Scoping Plan. On December 14, 2017, CARB adopted a second update to the Scoping Plan (CARB 2017). The 2017 Scoping Plan details how the state will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. Other objectives listed in the 2017 Scoping Plan are to provide direct GHG emissions reductions, support climate investment in disadvantaged communities, and support the Clean Power Plan and other federal actions.

Senate Bill 375 (The Sustainable Communities and Climate Protection Act of 2008)

Signed into law on September 30, 2008, SB 375 provides a process to coordinate land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction goals established by AB 32. SB 375 requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, aligns planning for transportation and housing, and creates specified incentives for the implementation of the strategies.

Assembly Bill 1493 (Pavley Regulations and Fuel Efficiency Standards)

AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011. The regulations establish one set of emission standards for model years 2009–2016 and a second set of emissions standards for model years 2017 to 2025. By 2025, when all rules will be fully implemented, new automobiles will emit 34% fewer CO_2e emissions and 75% fewer smog-forming emissions.

Senate Bill 1368 (Emission Performance Standards)

SB 1368 is the companion bill of AB 32, which directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 limits carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the state. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, for 1,100 pounds of CO_2 per megawatt-hour.

Senate Bill 1078 and SBX1-2 (Renewable Electricity Standards)

SB 1078 required California to generate 20% of its electricity from renewable energy by 2017. This goal was accelerated with SB 107, which changed the due date to 2010 instead of 2017. On November 17, 2008, Executive Order S-14-08 established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33% of their load with renewable energy by 2020. Executive Order S-21-09 also directed CARB to adopt a regulation by July 31, 2010, requiring the state's load serving entities to meet a 33% renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SB X1-2 codified the 33% by 2020 goal.

Senate Bill 350 (Clean Energy and Pollution Reduction Act of 2015)

Signed into law on October 7, 2015, SB 350 implements the goals of Executive Order B-30-15. The objectives of SB 350 are to increase the procurement of electricity from renewable sources from 33% to 50% (with interim targets of 40% by 2024, and 45% by 2027) and to double the energy efficiency savings in electricity and natural gas end uses of retail customers through energy efficiency and conservation. SB 350 also reorganizes the Independent System Operator to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

Assembly Bill 398 (Market-Based Compliance Mechanisms)

Signed on July 25, 2017, AB 398 extended the duration of the Cap-and-Trade program from 2020 to 2030. AB 398 required CARB to update the Scoping Plan and for all GHG rules and regulations adopted by the state. It also designated CARB as the statewide regulatory body responsible for ensuring that California meets its statewide carbon pollution reduction targets, while retaining local air districts' responsibility and authority to curb toxic air contaminants and criteria pollutants from local sources that severely impact public health. AB 398 also decreased free carbon allowances over 40% by 2030 and prioritized Cap-and-Trade spending to various programs including reducing diesel emissions in impacted communities.

Senate Bill 150 (Regional Transportation Plans)

Signed on October 10, 2017, SB 150 aligns local and regional GHG reduction targets with state targets (i.e., 40% below their 1990 levels by 2030). SB 150 creates a process to include communities in discussions on how to monitor their regions' progress on meeting these goals. The bill also requires CARB to regularly report on that progress, as well as on the successes and the challenges regions experience associated with achieving their targets. SB 150 provides for accounting of climate change efforts and GHG reductions and identify effective reduction strategies.

Senate Bill 100 (California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases)

Signed into Law in September 2018, SB 100 increased California's renewable electricity portfolio from 50% to 60% by 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs using executive orders. Although not regulatory, they set the state's tone and guide the actions of state agencies.

Executive Order S-3-05

Executive Order S-3-05 was issued on June 1, 2005, which established the following GHG emissions reduction targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07

Issued on January 18, 2007, Executive Order S-01-07 mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020. The executive order established a Low Carbon Fuel Standard and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. CARB adopted the Low Carbon Fuel Standard on April 23, 2009.

Executive Order S-13-08

Issued on November 14, 2008, Executive Order S-13-08 facilitated the California Natural Resources Agency development of the 2009 California Climate Adaptation Strategy. Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order S-14-08

Issued on November 17, 2008, Executive Order S-14-08 expands the state's Renewable Energy Standard to 33% renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33% of electricity sold in the state come from renewable energy by 2020. CARB adopted the Renewable Electricity Standard on September 23, 2010, which requires 33% renewable energy by 2020 for most publicly-owned electricity retailers.

Executive Order S-21-09

Issued on July 17, 2009, Executive Order S-21-09 directs CARB to adopt regulations to increase California's Renewable Portfolio Standard to 33% by 2020. This builds upon SB 1078 (2002), which established the California Renewable Portfolio Standard program, requiring 20% renewable energy by 2017, and SB 107 (2006), which advanced the 20% deadline to 2010, a goal that was expanded to 33% by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15

Issued on April 29, 2015, Executive Order B-30-15 established a California GHG reduction target of 40% below 1990 levels by 2030 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of CO_2e. The 2030 target acts as an interim goal on the way to achieving reductions of 80% below 1990 levels by 2050, a goal set by Executive Order S-3-05. The executive order also requires the state's climate adaptation plan to be updated every 3 years and for the state to continue its climate change research program, among other provisions. With the enactment of SB 32 in 2016, the Legislature codified the goal of reducing GHG emissions by 2030 to 40% below 1990 levels.

Executive Order B-55-18

Issued on September 10, 2018, Executive Order B-55-18 establishes a goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the existing statewide targets of reducing GHG emissions. The executive order requires CARB to work with relevant state agencies to develop a framework for implementing this goal. It also requires CARB to update the Scoping Plan to identify and recommend measures to achieve carbon neutrality. The executive order also requires state agencies to develop sequestration targets in the Natural and Working Lands Climate Change Implementation Plan.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat, even with rapid population growth.

Title 20 Appliance Efficiency Regulations

The appliance efficiency regulations (20 CCR 1601–1608) include standards for new appliances. Twenty-three categories of appliances are included in the scope of these regulations. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24 Building Energy Efficiency Standards

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (24 CCR Part 6) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2016 Building Energy Efficiency Standards approved on January 19, 2016, went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018, and went into effect on January 1, 2020. Under the 2019 standards, residential dwellings will be required to use approximately 53% less energy and nonresidential buildings will be required to use approximately 30% less energy than buildings under the 2016 standards.

Title 24 California Green Building Standards Code

The California Green Building Standards Code (24 CCR Part 11), commonly referred to as CALGreen, is a statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and nonresidential buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. Updates to the CALGreen Code took effect on January 1, 2020 (2019 CALGreen). The 2019 CALGreen standards will continue to improve upon the existing standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The new 2019 CALGreen standards require residential buildings to be solar ready through solar panels (refer to Section 110.10 in the 2019 Building Energy Efficiency Standards for more details).

Local

Southern California Association of Governments

On September 3, 2020, the Regional Council of Southern California Association of Governments (SCAG) formally adopted the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments – Connect SoCal (2020–2045 RTP/SCS). The SCS portion of the 2020–2045 RTP/SCS highlights strategies for the region to reach the regional target of reducing GHGs from autos and light-duty trucks by 8% per capita by 2020, and 19% by 2035 (compared to 2005 levels). Specially, these strategies are as follows:

- Focus growth near destinations and mobility options
- Promote diverse housing choices
- Leverage technology innovations
- Support implementation of sustainability policies
- Promote a green region

Furthermore, the 2020–2045 RTP/SCS discusses a variety of land use tools to help achieve the state-mandated reductions in GHG emissions through reduced per capita vehicle miles traveled. Some of these tools include center focused placemaking, focusing on priority growth areas, job centers, transit priority areas, as well as high quality transit areas and green regions.

City of Carson Climate Action Plan

The City and the South Bay Cities Council of Governments has also prepared a Climate Action Plan (CAP) (SBCCG 2017) to guide the City of Carson toward a more sustainable future. However, the City's CAP is not qualified as a GHG reduction plan under the California Environmental Quality Act (CEQA). The CAP notes that its analysis and optional strategies can be used in the future to help create a Qualified Climate Reduction Strategy under CEQA, to create GHG thresholds to be used in CEQA analysis and can be used to update the City's General Plan.

The goal of the CAP is to reduce GHG emissions within the City. The City's CAP serves as a guide for action by setting GHG emission reduction goals and establishing strategies and policy to achieve desired outcomes over the next 20 years. The CAP outlines various municipal measures that encourage reductions in the following categories: land use and transportation, energy efficiency, solid waste, urban greening, and energy generation and storage.

The City's GHG emission reduction goals are consistent with the state's AB 32 GHG emission reduction targets. The City's target was calculated as a 15% decrease from 2005 levels by 2020 as recommended in the state AB 32 Scoping Plan. A longer-term goal was established for 2035 to reduce emissions by 49% below 2005 levels. These goals put the City on a path toward the state's long-term 2050 goal to reduce emissions by 80% below 1990 levels.

4.6.3 Thresholds of Significance

Appendix G of the CEQA Guidelines contains the Environmental Checklist form that was used during the preparation of this study. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (refer to Impact Statement GHG-1); and
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (refer to Impact Statement GHG-2).

Based on these standards and thresholds, the effects of the proposed Project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts.

Greenhouse Gas Emissions Thresholds

Amendments to CEQA Guidelines Section 15064.4 were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions. Consistent with existing CEQA practice, Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. This section recommends certain factors to be considered in the determination of significance (i.e., the extent to which a project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHGs). The amendments do not establish a quantified or performance-based threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies or suggested by other experts, such as the California Air Pollution Control Officers Association, so long as any threshold chosen is supported by substantial evidence (14 CCR 15064.7[c]).

The California Natural Resources Agency has also clarified that the CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and therefore GHG emissions should be analyzed in the context of CEQA's requirements for cumulative impact analyses (14 CCR 15064[h][3]).[3] A project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements to avoid or substantially lessen the cumulative problem within the geographic area of the project (14 CCR 15064[h][3]).

While the City has a CAP, the City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions, nor have the South Coast Air Quality Management District, CARB, or any other state or regional

[3] See California Natural Resources Agency, Final Statement of Reasons for Regulatory Action (December 2009), pp. 11–13, 14, 16; see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, secretary for Natural Resources, April 13, 2009 (https://planning.lacity.org/eir/CrossroadsHwd/deir/files/references/C01.pdf).

agency adopted a numerical significance threshold for assessing GHG emissions that is applicable to the Project. Since there is no applicable adopted or accepted numerical threshold of significance for GHG emissions, the methodology for evaluating the Project's impacts related to GHG emissions focuses on its consistency with statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. This evaluation of consistency with such plans is the sole basis for determining the significance of the project's GHG-related impacts on the environment.

Notwithstanding, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the Project using recommended air quality models, as described in the following text. The primary purpose of quantifying the Project's GHG emissions is to satisfy CEQA Guidelines Section 15064.4(a), which calls for a good-faith effort to describe and calculate emissions. The estimated emissions inventory is also used to determine if there would be a reduction in the project's incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions. However, the significance of the Project's GHG emissions impacts is not based on the amount of GHG emissions resulting from the Project.

4.6.4 Impacts Analysis

Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

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

Project-Related Sources of Greenhouse Gas Emissions

Project-related GHG emissions include emissions from construction activities that are summed and amortized over the lifetime of the Project (assumed to be 30 years), then added to the operational emissions (SCAQMD 2009). Project operational emissions would result from area sources, and mobile sources, while indirect sources include emissions from electricity consumption, water demand, and solid waste generation. Mobile emissions are based on the Imperial Avalon Project Local Transportation Assessment (Transportation Assessment) prepared by Fehr and Peers provided by the Imperial Avalon LLC (Project Applicant) on March 26, 2021. California Emissions Estimator Model Version 2016.3.2 (CalEEMod) relies upon trip data within the Project's Transportation Assessment and Project specific land use data to calculate emissions. Vehicle emission factors were taken from CARB's 2017 Emission Factor (EMFAC2017) model and incorporated into CalEEMod.

Existing Greenhouse Gas Emissions

The existing Project site is currently developed with the Imperial Avalon Mobile Estates mobile home park (Mobile Home Park), which consists of 225 mobile home coaches, a recreational vehicle storage yard, and a common area with a clubhouse, grass field, recreation building, swimming pool, and guest parking spaces. A CalEEMod model run was conducted to quantify the existing GHG emissions from the Mobile Home Park. Trip generation rates associated with the existing use were based on the Transportation Assessment (Section 4.13, Transportation). According to the Transportation Assessment, the existing Project site generates approximately 1,141 mobile daily trips.

Project Greenhouse Gas Emissions

The proposed Project would construct a mixed-use development consisting of approximately 10,352 square feet of café/restaurant space and 1,213 residential units, as well as residential amenities and open space areas. Table 4.6-2, Annual Greenhouse Gas Emissions, presents the GHG emissions from the existing use, the proposed Project, and the Project's net increase of GHG emissions from the existing use. The net operation emissions were calculated by subtracting the existing use emissions from the proposed Project emissions. Project GHG emissions were calculated using CalEEMod and an EMFAC2017 for the Project's 2027 opening year. The proposed Project would include GHG emission reductions from the most current building energy efficiency standards, the 2019 Title 24 building code and 2019 CALGreen. Compliance with Title 24 and CALGreen standards would ensure the Project incorporates photovoltaic solar panels, energy efficient windows, insulation, lighting, ventilation systems, as well as water efficient fixtures and electric vehicles charging infrastructure. Table 4.6-2 presents the estimated existing and proposed Project's CO_2, N_2O, and CH_4 emissions. CalEEMod outputs are contained within Appendix F.

Table 4.6-2. Annual Greenhouse Gas Emissions

Source	CO_2	CH_4		N_2O		Total Metric Tons of CO_2e
	Metric Tons per Year[1]	*Metric Tons per Year*[1]	*Metric Tons of CO_2e*[2]	*Metric Tons per Year*[1]	*Metric Tons of CO_2e*[2]	
Existing Conditions[4,5,7]						
Direct Emissions						
Area Source	52.42	<0.01	0.12	<0.01	0.27	52.80
Mobile Source	1,285.94	0.10	2.39	<0.01	<0.01	1,288.33
Total Direct Emissions[3,5]	**1,338.36**	**0.10**	**2.50**	**<0.01**	**0.27**	**1,341.13**
Indirect Emissions						
Energy	364.83	0.02	0.43	<0.01	1.39	366.65
Solid Waste	21.01	1.24	31.04	<0.01	<0.01	52.05
Water Demand	75.76	0.48	12.04	0.01	3.61	91.39
Total indirect Emissions[3,5]	**461.60**	**1.74**	**43.51**	**0.01**	**5.00**	**510.09**
Total Existing Emissions[3]	**1,851.22 Metric Tons of CO_2e per year**					
Proposed Project Greenhouse Gas Emissions[4,7]						
Direct Emissions						
Construction (amortized over 30 years)	501.87	0.04	0.98	<0.01	<0.01	502.85
Area Source[6]	282.63	0.02	0.62	<0.01	1.43	284.68
Mobile Source	7,231.55	0.48	12.03	<0.01	<0.01	7,243.58
Total Direct Emissions[3,5]	**8,016.04**	**0.55**	**13.63**	**0.00**	**1.43**	**8,031.11**
Indirect Emissions						
Energy[8]	2,321.18	0.11	2.65	0.03	8.97	2,332.81
Solid Waste	69.27	4.09	102.35	0.00	0.00	171.62
Water Demand[9]	441.25	2.74	68.47	0.07	20.50	530.22
Total Indirect Emissions[3]	**2,831.70**	**6.94**	**173.47**	**0.10**	**29.47**	**3,034.65**

Table 4.6-2. Annual Greenhouse Gas Emissions

Total Project-Related Emissions[3]	11,065.75 Metric Tons of CO_2e per year
Total Net Project Emissions[6]	9,214.53 Metric Tons of CO_2e per year

Notes:

1 Emissions calculated using California Emissions Estimator Model Version 2016.3.2 (CalEEMod) computer model and EMFAC2017. While there is a new version of CalEEMod, CalEEMod 2016.3.2 was the version in place at the time of the posting of the NOP. The analyses prepared under CalEEMod 2016.3.2 are generally more conservative than those prepared under CalEEMod 2020.4.0. The older model was based on CARB's EMFAC2014 emissions model, which did not capture more recent advanced clean car regulations adopted after 2015 and the accelerated phase-in of partial Zero Emission Vehicles. In addition, CalEEMod 2016.3.2 did not factor in California's 2019 Title 24 standards, which have more stringent energy standards that reduce energy-related emissions from electricity and natural gas use.

2 CO_2 Equivalent values calculated using the EPA Website, *Greenhouse Gas Equivalencies Calculator*, http://www.epa.gov /cleanenergy/energy-resources/calculator.html, accessed June 2021.

3 Totals may be slightly off due to rounding.

4 This analysis compared GHG emissions from the existing on-site land use and the proposed Project buildout.

5 Existing on-site emissions do not include construction as the exiting on-site use is currently built and operational.

6 The total Net Project Emissions represents the net increase in mitigated GHG emissions from existing conditions (11,065.75 metric tons (MT) of CO_2e/year – 1,851.22 MT CO_2e/year = 9,214.53 MT CO_2e/year).

7 Emission reductions applied in the CalEEMod model, or 'mitigated emissions', include regulatory requirements such as compliance with the 2019 Title 24 Building Standards Code and the 2019 CALGreen Code. The 2019 Title 24 Building Standards Code and the 2019 CALGreen Code would only apply to future development (i.e., proposed Project) and not existing on-site uses. These mandatory regulatory requirements would include high efficiency lighting, low flow plumbing fixtures, solid waste diversion, and electricity from renewable energy sources.

8 As of 2019, Southern California Edison (SCE) was delivering 48% carbon-free power to customers. California has set Renewables Portfolio Standard targets that require California retail sellers of electricity to provide 60% of electricity sales from renewable resources by 2030. As such, by 2027 SCE would deliver 57% carbon-free power to customers. Therefore, by using the 2019 intensity factor, emissions generated by electricity are approximately 9% more conservative than utilizing the 2027 factor.
Source: Southern California Edison, Edison International Sustainability Report 2019, https://www.edison.com/content /dam/eix/documents/sustainability/eix-2019-sustainability-report.pdf, accessed February 19, 2021.

9 To provide a conservative analysis, the water demand emissions represent the "unmitigated" emissions in Appendix A of Appendix F do not account for the GHG reductions associated with the CALGreen Code requirements.
Refer to Appendix F, for detailed model input/output data.

As shown in Table 4.6-2, the total amount of Project related operational GHG emissions from direct and indirect sources combined, minus the existing use GHG emissions, would be approximately 9,214.53 metric tons of CO_2e per year.

Greenhouse Gas Plan Consistency

The following discussion analyzes the Project's consistency with the City's CAP, 2020–2045 RTP/SCS, and 2017 Scoping Plan. As previously noted, the CAP is not a qualified GHG reduction plan under CEQA that the proposed Project would be able to tier from and the City has not yet adopted a such plan. Therefore, the Project's consistency with the CAP has been included for informational purposes only.

City of Carson Climate Action Plan

In 2017, the City, in cooperation with the South Bay Cities Council of Governments, developed an unqualified CAP. The CAP serves as a guide for action by setting GHG emission reductions goals and establishes strategies and policy to achieve outcomes over the next 20 years. The Project's consistency with CAP measures is discussed in Table 4.6-3, Project Consistency with CAP.

Table 4.6-3. Project Consistency with CAP

Goal	Measure	Project Compliance
Goal LUT: A – Accelerate the Market for EV Vehicles	**Measure LUT: A2 – EV Charging Policies.** EV charging policies incentivize EV adoption by making it easier to charge EVs. City strategies to support these policies can range from on-the-ground implementation of charging stations (level 1, 2, and DC 3) to adopting new development standards relating to EVs.	**Consistent.** The Project would be consistent with this measure by supporting the use of electric vehicles (EVs). Per the 2019 CALGreen Residential Mandatory Measure 4.106.4 and Nonresidential Mandatory Measure 5.106.5, the Project would be required to install EV charging spaces, EV parking spaces, and EV conduits (townhome garages only).
Goal LUT: G – Land Use Strategies	**Measure EE: G1 – Increase Density.** These strategies seek to increase destination accessibility by encouraging combined uses such as office, commercial, institutional, and residential within areas and developments.	**Consistent.** The Project would include 1,527,694 square feet of residential uses (high-density multifamily buildings and townhomes), as well as 10,352 square feet of café and restaurant space. As a high-density mixed-use infill project, the Project would comply with this CAP measure.
	Measure EE: G2 – Increase Diversity. These strategies encourage projects to mix uses such as office, commercial, institutional, and residential within the same development.	**Consistent.** The Project would consist of a residential and commercial mixed-use development in a highly urbanized area. Refer to Measure EE: G1 Response for further analysis.
Goal EE: B – Increase Energy Efficiency in New Residential Developments	**Measure EE: B1 – Encourage or require EE Standards Exceeding Title 24.** As part of the 2010 California Green Building Standards (CALGreen), a two-tiered system was designed to allow local jurisdictions to adopt codes that go beyond state standards. The two tiers contain measures that are more stringent and achieve an increased reduction in energy usage by 15% (Tier 1) or 30% (Tier 2) beyond Title 24. It is also important that Title 24 Standards are updated so that the full GHG reduction benefit of the title can be realized. City staff that are well-informed can implement updates quickly and effectively.	**Consistent.** It should be noted that the 2016 CALGreen and Title 24 standards were effective when the CAP was adopted. Since then, the 2019 CALGreen and Title 24 standards were adopted. Therefore, the Project would comply with the 2019 CALGreen and Title 24 standards. The 2019 Title 24 standards, which took effect on January 1, 2020, promote photovoltaic systems in newly constructed residential buildings. With rooftop solar electricity generation, homes built under the 2019 standards will use about 53% less energy than those under the 2016 standards. Additionally, nonresidential buildings will use about 30% less energy, mainly to lighting upgrades, when compared to 2016 standards (CEC 2019).
Goal EE: D – Increase Energy Efficiency in New Commercial Developments	**Measure EE: D1 – Encourage or require EE Standards Exceeding Title 24.** This measure will develop City staff to be resources in encouraging and implementing energy efficiency beyond that are required by current Title 24 Standards for commercial development. In addition, this measure helps ensure that Title 24 Standards are updated.	**Consistent.** Refer to Measure EE: B1 response.

Table 4.6-3. Project Consistency with CAP

Goal	Measure	Project Compliance
Goal EE: E. – Increase Energy Efficiency through Water Efficiency (WE)	**Measure EE: E1 – Promote or Require Water Efficiency through SB X7-7.**	**Consistent.** The Project would consume water from water suppliers that would comply with Senate Bill X7-7 and the Water Sector of the Assembly Bill (AB) 32 Scoping Plan. In addition, the Project's irrigation systems would be controlled by an evapotranspiration weather-based control system to minimize water usage and reduce irrigation runoff. Further, the Project would comply with outdoor water conservation measures outlined per California water regulations (AB 1881) and local water efficient landscape ordinances.
	Measure EE: E2 – Promoting Water Efficiency Standards Exceeding SB X7-7.	
Goal EE: F – Decrease energy demand through reducing urban heat island effect.	**Measure EE: F1 –** Promote Tree Planting for Shading and Energy Efficiency.	**Consistent.** Trees would be dispersed throughout the Project site. Landscaping within the Project site will be designed with predominantly drought tolerant species, including the use of natives and seasonal ornamental plantings.
Goal SW: A – Increase Diversion and Reduction of Residential Waste	**Measure SW: A2 – Implement Residential Collection Programs to Increase Diversion of Waste.**	**Consistent.** Per AB 341, the Project would be required to reduce, recycle, or compost 75% of the solid waste generated.
Goal SW: B – Increase Diversion and Reduction of Commercial Waste	**Measure SW: B2 – Implement Commercial Collection Programs to Increase Diversion of Waste.**	**Consistent.** Per AB 341, the Project would be required to reduce, recycle, or compost 75% of the solid waste generated.

Sources: SBCCG 2017; CEC 2019

2017 Scoping Plan

The 2017 Scoping Plan identifies additional GHG reduction measures necessary to achieve the 2030 target. These measures build upon those identified in the first update to the Scoping Plan (2013). Although a number of these measures are currently established as policies and measures, some measures have not yet been formally proposed or adopted. It is expected that these measures or similar actions to reduce GHG emissions would be adopted as required to achieve statewide GHG emissions targets. Table 4.6-4, Project Consistency with 2017 Scoping Plan, provides an evaluation of applicable reduction actions/strategies by emissions source category to determine how the Project would be consistent with or exceed reduction actions/strategies outlined in the 2017 Scoping Plan.

Table 4.6-4. Project Consistency with 2017 Scoping Plan

Sector / Source	Category / Description	Project Consistency Analysis
Energy		
California Renewables Portfolio	Increases the proportion of electricity from renewable sources to 33% renewable power by 2020. SB 350 requires 50% by 2030. SB	**Consistent.** The Project would use energy from Southern California Edison (SCE), which is required to

Table 4.6-4. Project Consistency with 2017 Scoping Plan

Sector / Source	Category / Description	Project Consistency Analysis
Standard, Senate Bill (SB) 350 and SB 100	100 requires 44% by 2024, 52% by 2027, and 60% by 2030. It also requires the State Energy Resources Conservation and Development Commission to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.	meet the 2020, 2030, 2045, and 2050 performance standards. In 2020, approximately 31% of SCE's electricity came from renewable resources (CEC 2021). By 2030, SCE plans to achieve 80% carbon-free energy (CARB 2017). The Project would also meet the applicable requirements of the Title 24 Standards and CALGreen.
CCR, Title 24, Building Standards Code	Energy Efficiency Standards for Residential and Nonresidential Buildings.	**Mandatory Compliance.** The Project must demonstrate that it will meet the applicable requirements of the 2019 Title 24 Standards and CALGreen prior to approval of the building permits.
Assembly Bill (AB) 1109	The Lighting Efficiency and Toxics Reduction Act (AB 1109) prohibits manufacturing specified general purpose lights that contain levels of hazardous substances prohibited by the European Union. AB 1109 also requires a reduction in average statewide electrical energy consumption by not less than 50% from the 2007 levels for indoor residential lighting and not less than 25% from the 2007 levels for indoor commercial and outdoor lighting by 2018.	**No Conflict.** According to the California Energy Commission, energy savings from AB 1109 are achieved through codes and standards. Energy savings from AB 1109 are calculated as part of codes and standards savings (CEC 2013). As previously discussed, the Project would meet the applicable requirements of the 2019 Title 24 Standards and CALGreen, which include energy efficient lighting.
California Green Building Standards (CALGreen) Code Requirements	All bathroom exhaust fans shall be ENERGY STAR-compliant.	**Mandatory Compliance.** The Project construction plans must demonstrate that energy efficiency appliances, including bathroom exhaust fans, and equipment and would meet the applicable energy standards in the 2019 Title 24 Standards and CALGreen prior to approval of the building permits.
	Heating, ventilation, and air conditioning (HVAC) systems will be designed to meet American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standards.	**Mandatory Compliance.** The Project construction plans must demonstrate that energy efficiency appliances and equipment and would meet the applicable energy standards in ASHRAE 90.1-2013 Appendix G and the 2019 Title 24 Standards and CALGreen prior to approval of the building permits.
	Energy commissioning shall be performed for buildings larger than 10,000 square feet.	**Mandatory Compliance.** The Project must demonstrate compliance with CALGreen prior to approval of the building permits.

Table 4.6-4. Project Consistency with 2017 Scoping Plan

Sector / Source	Category / Description	Project Consistency Analysis
	Air filtration systems are required to meet a minimum efficiency reporting value (MERV) 8 or higher.	**Mandatory Compliance.** The Project must demonstrate compliance with the requirement of MERV 13 or higher, in accordance with the 2019 CALGreen Code, prior to approval of the building permits.
	Refrigerants used in newly installed HVAC systems shall not contain any chlorofluorocarbons (CFCs).	**Mandatory Compliance.** The Project must meet this requirement as part of its compliance with the 2019 CALGreen Code prior to approval of the building permits.
	Parking spaces shall be designed for carpool or alternative fueled vehicles. Up to 8% of total parking spaces will be designed for such vehicles.	**Mandatory Compliance.** The Project would meet this requirement as part of its compliance with the 2019 CALGreen Code. Per the 2019 CALGreen Residential Mandatory Measure 4.106.4 and Nonresidential Mandatory Measure 5.106.5, the Project would be required to install electric vehicle (EV) charging spaces, EV parking spaces, and EV conduits in the townhome garages.
	Long-term and short-term bike parking shall be provided for up to 5% of vehicle trips.	**Consistent.** The Project would meet this requirement by providing short-term bicycle parking (5% of the visitor vehicular parking stalls) and long-term bicycle parking (5% of the tenant vehicular parking stalls) in accordance with the 2019 CALGreen Code.
	Requires use of low volatile organic compound (VOC) coatings consistent with Air Quality Management District Rule 1168.	**Consistent**. The Project would be consistent with this regulation and would meet the low VOC coating requirements.
SB 1368, CCR Title 20, Cap-and-Trade Program	The Cap-and-Trade Program places an economy-wide "cap" on major sources of greenhouse gas emissions (i.e. refineries, power plants, industrial facilities and transportation fuels) and minimizes the compliance costs of achieving AB 32 goals. Electricity generators and large industrial facilities emitting 25,000 metric tons of CO_2e or more annually are subject to the Cap-and-Trade Program. Each year the cap is lowered by approximately 3%, ensuring that California is reducing greenhouse gases.	**Not Applicable.** This program involves capping emissions from large-scale electricity generation, industrial facilities, and broad scoped fuels. Caps do not directly affect mixed-use projects.

Table 4.6-4. Project Consistency with 2017 Scoping Plan

Sector / Source	Category / Description	Project Consistency Analysis
Mobile Sources		
Mobile Source Strategy (Cleaner Technology and Fuels)	Reduce GHGs and other pollutants from the transportation sector through transition to zero-emission and low-emission vehicles, cleaner transit systems and reduction of vehicle miles traveled.	**Consistent.** The Project would be consistent with this strategy by supporting the use of zero-emission and low-emission vehicles. Per the 2019 CALGreen Residential Mandatory Measure 4.106.4 and Nonresidential Mandatory Measure 5.106.5, the Project would be required to install EV charging spaces, EV parking spaces, and EV conduits in the townhome garages. The Project would be required to install 125 EV charging spaces, 76 EV parking spaces, and 380 EV conduits in the townhome garages.
AB 1493 (Pavley Regulations)	Reduces GHG emissions in new passenger vehicles from model year 2012 through 2016 (Phase I) and model years 2017–2025 (Phase II). Also reduces gasoline consumption to a rate of 31% of 1990 gasoline consumption (and associated GHG emissions) by 2020.	**Not Applicable.** These regulations apply to automobile manufacturers, not individual land uses. Mobile emissions associated with the Project in Table 4.6-2 reflect compliance with this regulation. GHG emissions related to vehicular travel by the Project would benefit from this regulation because vehicle trips associated with the Project would be affected by AB 1493. Mobile source emissions generated by the Project would be reduced with implementation of AB 1493 consistent with reduction of GHG emissions under AB 32.
Low Carbon Fuel Standard (Executive Order S-01-07)	Establishes protocols for measuring life-cycle carbon intensity of transportation fuels and helps to establish use of alternative fuels. This executive order establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020.	**Not Applicable.** The Low Carbon Fuel Standard applies to manufacturers of automotive fuels, not to individual land uses. Mobile emissions associated with the Project in Table 4.6-2 reflect compliance with this regulation. GHG emissions related to vehicular travel by the Project would benefit from this regulation and mobile source emissions generated by the Project would be reduced with implementation of the Low Carbon Fuel Standard consistent with reduction of GHG emissions under AB 32.

Table 4.6-4. Project Consistency with 2017 Scoping Plan

Sector / Source	Category / Description	Project Consistency Analysis
Advanced Clean Cars Program	In 2012, CARB adopted the Advanced Clean Cars (ACC) program to reduce criteria pollutants and GHG emissions for model year vehicles 2015 through 2025. ACC includes the Low-Emission Vehicle regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle regulation, which requires manufacturers to produce an increasing number of pure Zero-Emission Vehicles (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years.	**Not Applicable.** The standards would apply to manufacturers of vehicles used by visitors and employees associated with the Project. Notwithstanding, the Project would install EV charging spaces, EV parking spaces, and EV conduits in the townhome garages in accordance with 2019 CALGreen Residential Mandatory Measure 4.106.4 and Nonresidential Mandatory Measure 5.106.5. The Project would be required to install 125 EV charging spaces, 76 EV parking spaces, and 380 EV conduits in the townhome garages.
Senate Bill (SB) 375	SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the state's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035.	**Consistent.** The SCAG 2020–2045 RTP/SCS contains measures to achieve vehicle miles traveled reductions required under SB 375. Refer to Table 4.6-5, Project Consistency with the 2020–2045 RTP/SCS, for an analysis of the Project's consistency with the goals and objectives outlined in the 2020–2045 RTP/SCS.
Water		
CCR, Title 24, Building Standards Code	Title 24 includes water efficiency requirements for new residential and non- residential uses.	**Mandatory Compliance.** The Project would be required to comply with Chapter 4, Division 4.3 – Water Efficiency and Conservation of the 2019 Title 24 Standards. This includes compliance with the Model Water Efficient Landscape Ordinance.
Senate Bill X7-7	The Water Conservation Act of 2009 sets an overall goal of reducing per capita urban water use by 20% by December 31, 2020. Each urban retail water supplier shall develop water use targets to meet this goal. This is an implementing measure of the Water Sector of the AB 32 Scoping Plan. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convene, treat, and distribute the water; it also reduces emissions from wastewater treatment.	**Consistent.** The Project would consume water from water suppliers that would comply with Senate Bill X7- 7 and the Water Sector of the AB 32 Scoping Plan. In addition, the Project would comply with outdoor water conservation measures outlined per California water regulations (AB 1881) and local water efficient landscape ordinances.

Table 4.6-4. Project Consistency with 2017 Scoping Plan

Sector / Source	Category / Description	Project Consistency Analysis
Solid Waste		
California Integrated Waste Management Act (IWMA) of 1989 and Assembly Bill (AB) 341	The IWMA mandated that state agencies develop and implement an integrated waste management plan which outlines the steps to be taken to divert at least 50% of their solid waste from disposal facilities. AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a Statewide goal for 75% disposal reduction by the year 2020.	**Not Applicable.** These regulations apply to municipal agencies who are responsible for reducing landfill disposal of solid wastes collected in their jurisdictions. GHG emissions related to solid waste generation from the Project would benefit from this regulation as it would decrease the overall amount of solid waste disposed of at landfills. The decrease in solid waste would then in return decrease the amount of methane released from the decomposing solid waste. Project-related GHG emissions from solid waste generation provided in Table 4.6-2 include a 50% reduction in solid waste generation source emissions.

Sources: CEC 2013, 2018; CARB 2017

2020–2045 Regional Transportation Plan/Sustainable Communities Strategy

On September 3, 2020, the Regional Council of SCAG formally adopted the 2020–2045 RTP/SCS. The 2020–2045 RTP/SCS includes performance goals that were adopted to help focus future investments on the best-performing projects, as well as different strategies to preserve, maintain, and optimize the performance of the existing transportation system. The SCAG 2020–2045 RTP/SCS is forecast to help California reach its GHG reduction goals by reducing GHG emissions from passenger cars by 8% below 2005 levels by 2020 and 19% by 2035 in accordance with the most recent CARB targets adopted in March 2018. Five key SCS strategies are included in the 2020–2045 RTP/SCS to help the region meet its regional vehicle miles traveled and GHG reduction goals, as required by the State. Table 4.6-5, Project Consistency with the 2020–2045 RTP/SCS shows the Project's consistency with these five strategies found within the 2020–2045 RTP/SCS. As shown therein, the proposed Project would be consistent with the GHG emission reduction strategies contained in the 2020–2045 RTP/SCS.

Table 4.6-5. Project Consistency with the 2020–2045 RTP/SCS

Reduction Strategy	Applicable Land Use Tools	Project Consistency Analysis
Focus Growth Near Destinations and 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	Center Focused Placemaking, Priority Growth Areas (PGA), Job Centers, High Quality Transit Areas (HQTAs), Transit Priority Areas (TPAs), Neighborhood Mobility Areas (NMAs), Livable Corridors,	**Consistent.** The Project would consist of 1,527,694 square feet of residential uses (high-density multifamily buildings and townhomes), as well as 10,352 square feet of café and restaurant space. The Project would replace

Table 4.6-5. Project Consistency with the 2020–2045 RTP/SCS

Reduction Strategy	Applicable Land Use Tools	Project Consistency Analysis
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)	Spheres of Influence (SOIs), Green Region, Urban Greening.	existing mobile homes and construct high-density residential uses. Therefore, the Project would be considered a mixed-use infill development. The Project site is located within a pedestrian-oriented area given that it fronts existing sidewalks to the east and west, and there are existing bus stops within 0.10 miles of the Project site. Furthermore, the Project site is located in an urbanized area and in close proximity to existing residential and commercial development. The proposed Project would also be within walking and biking distance of residential and commercial uses. The Project would include housing and job opportunities within the same development, as well as job opportunities nearby which serves to reduce vehicle miles traveled. The Project would provide bicycle parking spaces in accordance with the 2019 CALGreen Code. Therefore, the Project would focus growth near destinations and mobility options.
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	PGA, Job Centers, HQTAs, NMA, TPAs, Livable Corridors, Green Region, Urban Greening.	**Consistent.** The proposed Project would consist of a mixed-use development, including 180 senior independent living units. The Project would support mixed-use developments with housing nearby commercial and job centers. As such, the proposed Project would help increase housing while promoting a mixed-use development within a compact area with potential jobs, commercial uses, as well as access to a transit routes. The Project would be consistent with this reduction strategy.

Table 4.6-5. Project Consistency with the 2020–2045 RTP/SCS

Reduction Strategy	Applicable Land Use Tools	Project Consistency Analysis
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	HQTA, TPAs, NMA, Livable Corridors.	**Consistent.** The Project would be required to install electric vehicle (EV) charging stations, designated EV parking, as well as bike parking and storage in accordance with the 2019 Title 24 standards and CALGreen Code. Additionally, the 2019 Title 24 standards require photovoltaic solar panels on residential development. Therefore, the proposed Project would leverage technology innovations and help the City, County, and State meet its GHG reduction goals. The Project would be consistent with this reduction strategy.
Support Implementation of Sustainability Policies		
• Pursue funding opportunities to support local sustainable development implementation projects that reduce greenhouse gas 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	Center Focused Placemaking, PGAs, Job Centers, High Quality Transit Areas (HQTAs), TPAs, Neighborhood Mobility Areas (NMAs), Livable Corridors, SOIs, Green Region, Urban Greening.	**Consistent.** As previously discussed, the proposed Project would be located proximate to numerous transit routes, which would promote alternative modes of transportation. The Project would include public park spaces and gathering nodes, with walkable paseos connecting the active greenspace. Further, the Project would comply with sustainable practices included in the 2019 Title 24 standards and CALGreen Code, such as installation of photovoltaic solar panels and EV charging stations. Thus, the Project would be consistent with this reduction strategy.

Table 4.6-5. Project Consistency with the 2020–2045 RTP/SCS

Reduction Strategy	Applicable Land Use Tools	Project Consistency Analysis
• 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 decisions makers and staff on new tools, best practices and policies related to implementing the Sustainable Communities Strategy		
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	Green Region, Urban Greening, Greenbelts and Community Separators.	**Consistent.** The proposed Project consists of a mixed-use infill development in an urbanized area and would therefore not interfere with regional wildlife connectivity or concert agricultural land. The Project would also incorporate public park spaces and gathering nodes. The Project would be required to comply with 2019 Title 24 standards and CALGreen Code, which would help reduce energy consumption and reduce GHG emissions. Thus, the Project would support efficient development that reduces energy consumption and GHG emissions. The Project would be consistent with this reduction strategy.

Source: SCAG 2020.

Conclusion

In summary, the plan consistency analysis provided above demonstrates that the Project complies with or exceeds the plans, policies, regulations and GHG reduction actions/strategies outlined in the CAP, 2017 Scoping Plan, and 2020–2045 RTP/SCS. Therefore, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHGs. Furthermore, because the Project is consistent and does not conflict with these plans, policies, and regulations, the Project's incremental increase in GHG

emissions, as described, would not result in a significant impact on the environment. Therefore, Project-specific impacts with regard to climate change would be **less than significant**.

Would the Project have cumulatively considerable impacts with regards to greenhouse gas emissions?

The analysis of a project's GHG emissions is inherently a cumulative analysis because climate change is a global issue. Accordingly, the analysis takes into account the potential for the proposed Project to contribute to a cumulative impact of global climate change. As discussed, complies with or exceeds the plans, policies, regulations and GHG reduction actions/strategies outlined in the CAP, 2017 Scoping Plan, and 2020–2045 RTP/SCS. Therefore, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHGs. It is concluded that the Project's incremental contribution of GHG emissions would not be cumulatively considerable, and the Project's cumulative GHG impacts would be **less than significant**.

4.6.5 Mitigation Measures

The proposed Project would not result in significant impacts; therefore, no mitigation is required.

4.6.6 Level of Significance After Mitigation

All impacts were determined to be **less than significant**. No mitigation is required.

4.6.7 References

CARB (California Air Resources Board). 2017. *California's 2017 Climate Change Scoping Plan.* November 2017. https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

CEC (California Energy Commission). *2013 California Energy Efficiency Potential and Goals Study, Appendix Volume I*, August 15, 2013.

CEC. 2021. "2020 Power Content Label Southern California Edison." Accessed February 2022. https://www.energy.ca.gov/filebrowser/download/3902.

CEC. *2019 Building Energy Efficiency Standards Fact Sheet, March 2018.*

EPA (U.S. Environmental Protection Agency). 2010. *Methane and Nitrous Oxide Emission from Natural Sources*. Office of Atmospheric Programs, Washington DC. April 2010. https://nepis.epa.gov/Exe/ZyPDF.cgi/P100717T.PDF?Dockey=P100717T.PDF.

EPA. 2018a. "Overview of Greenhouse Gases." https://www.epa.gov/ghgemissions/overview-greenhouse-gases.

EPA. 2018b. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2016, Executive Summary*. April 12, 2018. https://www.epa.gov/sites/production/files/2018-01/documents/2018_executive_summary.pdf.

IPCC (Intergovernmental Panel on Climate Change). 2007. *Climate Change 2007: The Physical Science Basis*. New York, New York: Cambridge University Press. https://www.ipcc.ch/site/assets/uploads/2018/05/ar4_wg1_full_report-1.pdf.

IPCC. 2013. *Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_all_final.pdf.

National Research Council. 2010. *Advancing the Science of Climate Change*. Washington, DC: The National Academies Press. https://www.nap.edu/catalog/12782/advancing-the-science-of-climate-change.

SBCCG (South Bay Cities Council of Governments). 2017. *City of Carson Climate Action Plan*. http://southbaycities.org/sites/default/files/Carson%20CAP.pdf.

SCAG (Southern California Association of Governments). 2020. *The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments*. Connect SoCal. Adopted September 3, 2020. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176.

SCAQMD (South Coast Air Quality Management District). n.d. California Emissions Estimator Model (CalEEMod) Version 2016.3.2.

SCAQMD. 2009. Minutes for the GHG CEQA Significance Threshold, Stakeholder Working Group #13. August 26, 2009. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-13/ghg-meeting-13-minutes.pdf?sfvrsn=2.

Weather Spark. n.d. “Average Weather in Carson, California, United States.” Accessed February 2022. https://weatherspark.com/y/1618/Average-Weather-in-Carson-California-United-States-Year-Round.

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4.7 Hazards and Hazardous Materials

This section describes the existing hazardous materials conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project).

Information contained in this section was developed based on publicly available information from the State Water Resources Control Board (SWRCB), California Department of Toxic Substances Control (DTSC), and California Department of Forestry and Fire Protection (CAL FIRE). In addition, a site-specific Phase I and Limited Phase II technical report prepared by Advantage Environmental Consultants, LLC (AEC) in 2019 provided information regarding the potential presence of contamination in subsurface soils and soil gas at the Project site (Appendix G-1). Other documentation used in this analysis are listed in Section 4.7.7, References.

4.7.1 Existing Conditions

This section describes the existing conditions in the Project area and also identifies the resources that could be affected by the Project.

The study area for evaluation of hazards and hazardous materials impacts includes the Project site and surrounding properties, including the former Cal Compact Landfill to the north. The AEC Phase I report included an environmental database search that considered selected radii that are as much as 1 mile from the site; however, the analysis focused on the Project site and the immediately adjacent area (within 0.25 miles from the Project site). Sites beyond the immediately adjacent area (within 0.25 miles from the Project site) would have a remote chance of affecting subsurface materials beneath the Project site since releases of hazardous materials tend to be localized.

In addition, a radius of up to 0.25 miles from the Project site is considered relative to proximity to schools and the radius of up to 2 miles is similarly considered relative to proximity to airports, both in accordance with California Environmental Quality Act (CEQA) guidelines.

Definitions and Background

Hazardous Materials

A hazardous material is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment (California Health and Safety Code Chapter 6.95, section 25501[o]). The term “hazardous materials” refers to both hazardous substances and hazardous wastes. Under federal and state laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such or if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases).

Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been spent, discarded, discharged, spilled, contaminated, or are being stored until they can be disposed of properly (Title 22 California Code of Regulations [CCR] Section 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific criteria established in Sections 66261.20 through 66261.24 of the CCR Title 22. Hazardous substances are regulated by multiple agencies, as described in

Section 4.7.2, Relevant Plans, Policies, and Ordinances, and cleanup requirements of hazardous releases are determined on a case-by-case basis according to the agency (e.g., DTSC or SWRCB) with lead jurisdiction over a contaminated site.

Potential Receptors/Exposure

The sensitivity of potential receptors in the areas of known or potential hazardous materials contamination is dependent on several factors, the primary factor being the potential pathway for human exposure. Exposure pathways include external exposure, inhalation, and ingestion of contaminated soil, air, water, or food. The magnitude, frequency, and duration of human exposure can cause a variety of health effects, from short-term acute symptoms to long-term chronic effects. Potential health effects from exposure can be evaluated in a health risk assessment. The principal elements of health risk assessments typically include the following:

- Evaluation of the fate and transport processes for hazardous materials at a given site
- Identification of potential exposure pathways
- Identification of potential exposure scenarios
- Calculation of representative chemical concentrations
- Estimation of potential chemical uptake

Hazardous Building Materials Associated with Demolition and Renovation

Because of the age of some improvements and structures on the Project site, the potential exists for the structures to contain hazardous building materials. Older buildings and structures can contain building materials that include hazardous components such as lead-based paint (LBP), asbestos-containing materials (ACMs), mercury, and polychlorinated biphenyls (PCBs).

Among its numerous uses and sources, lead can be found in paint, water pipes, solder in plumbing systems, and in soils around buildings and structures painted with LBP. Old peeling paint can contaminate near surface soil, and exposure to residual lead can have adverse health effects, especially in children. LBP was phased out in the United States beginning with the passage of the Lead-Based Paint Poisoning Prevention Act in 1971. Prior to the U.S. Environmental Protection Agency (EPA) ban in 1978, LBP was commonly used on interior and exterior surfaces of buildings. Structures built prior to 1978 may have LBP, and some paints manufactured after 1978 for industrial or marine uses legally contain more than 0.06% lead. Pathways of exposure to lead can occur through inhalation, ingestion, dermal absorption, or absorption from retained/embedded leaded foreign body. Exposure to lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, the cardiovascular system, and affects the oxygen-carrying capacity of blood. Children are particularly susceptible to potential lead-related health problems because it is easily absorbed into developing systems and organs.

Asbestos, a naturally occurring fibrous material, was used as a fireproofing and insulating agent in building construction before such uses were terminated due to liability concerns in the late 1970s. From 1973 through 1990, several laws were passed banning the manufacture and use of ACM (EPA 2020). Some materials are still allowed to contain asbestos. The demolition of structures with ACM can result in airborne fibers, inhalation of which can lead to lung disease. Structures that predate 1981 and structural materials installed before 1981 are presumed to potentially contain asbestos. Because it was widely used prior to the discovery of its health effects, asbestos can be found in a variety of building materials and components such as insulation, walls and ceilings, floor tiles, and pipe insulation.

Friable (easily crumbled) materials are particularly hazardous because inhalation is the primary mode of asbestos entry into the body. Non-friable asbestos is generally bound to other materials such that it does not become airborne under normal conditions. Non-friable asbestos and encapsulated friable asbestos do not pose substantial health risks.

Asbestos exposure is a human respiratory hazard, causing health problems such as lung cancer and asbestosis. Any activity that involves cutting, grinding, or drilling during building renovation or demolition or relocation of underground utilities could release friable asbestos fibers unless proper precautions are taken. Inhalation of airborne fibers is the primary mode of asbestos entry into the body, making friable materials the greatest potential health risk.

Spent fluorescent light tubes commonly contain mercury vapors, the exposure to which can have both long-term (e.g., anxiety, loss of appetite, fatigue, changes in vision or hearing) and/or short-term (e.g., sore throat, shortness of breath, chest pain, headache, vision problems) health effects. In February 2004, regulations in California classified all fluorescent lamps and tubes as hazardous waste. When these lamps or tubes are broken, mercury is released to the environment and can become airborne. When inhaled, mercury vapors can be absorbed through the lungs and into the bloodstream. Released mercury that is not vaporized can also be washed by stormwater into waterways. Mercury switches (also known as a mercury tilt switches) are switches which open and close an electrical circuit through a small amount of liquid mercury and may be present in some buildings.

PCBs are organic oils that were formerly used primarily as insulators in many types of electrical equipment, such as transformers and capacitors. After PCBs were determined to be carcinogenic in the mid- to late-1970s, the EPA banned PCB use in most new equipment and began a program to phase out certain existing PCB-containing equipment (EPA 2021). Fluorescent lighting ballasts manufactured after January 1, 1978 do not contain PCBs and are required to have a label clearly stating that PCBs are not present in the unit. PCBs are highly persistent in the environment, and exposure to PCBs has been demonstrated to cause cancer, as well as a variety of other adverse health effects on the immune system, reproductive system, nervous system, and endocrine system. The primary route of exposure to PCBs in the general population is the consumption of contaminated foods, particularly meat, fish, and poultry. Occupational exposure to PCBs occurs mainly through inhalation and dermal contact routes.

Soil and Groundwater Contamination

Many commercial and light industrial businesses, as well as some agricultural practices, use materials and generate wastes that are considered hazardous by federal and State standards. Such businesses and practices, which include automobile service, industrial manufacturing, and dry cleaners, are required to contain, manage, and transport their hazardous materials in conformance with established State regulations to ensure hazardous materials that can become a health hazard are not released to subsurface soils and groundwater.

Results of the environmental database search from the Phase I report for the Project site identified a number of historical releases of hazardous materials in properties located within 0.125 miles of the Project site (Appendix G-1). While some of these regulatory cases have been closed due to agency review identifying no remaining threat to human health and the environment, others such as the Cal Compact Landfill (discussed further in the following text), Montrose Chemical Corporation, and a former gasoline service station located adjacent to the eastern boundary of the site warranted further sampling (see summary of results in the following discussion).

Cal Compact Landfill

Immediately north of the Project site is the location of the former Class II Landfill operated by Cal Compact, Inc. The landfill was permitted beginning in 1959 and was active until closure in 1968 (DTSC 2021). As a Class II landfill, it was permitted to receive ordinary household and commercial waste, as well as industrial liquid wastes that included hazardous materials and wastes. Site investigations for subsurface contamination of hazardous substances began in 1978 and detected volatile organic compounds (VOCs), heavy metals, and petroleum hydrocarbons in subsurface soil and groundwater. As a result of the contamination on and adjacent to the landfill, the 157-acre site was listed by DTSC as a hazardous substances release site. On March 18, 1988, Remedial Action Order No. HSA87/88-040 was issued for the site requiring the implementation of remediation activities to ensure the non-release of any hazardous substances and the health and safety of nearby residents and surrounding areas. In 1995, DTSC entered into a Consent Order and Remedial Action Order with BKK, the successor to Cal Compact Inc. to further remediate the site. There is a potential for contaminants to migrate to groundwater, surface water, and air. Exposure of humans to airborne VOCs in air may be facilitated by movement of these substances from decomposing landfill material to the atmosphere. Although the fill material was capped with about 3 to 20 feet of cover soil when the landfill ceased operations, landfill gas containing methane has been detected escaping from cracks in the cover material and off site. These gases may contain hazardous VOCs. There is a potential threat to groundwater posed by landfill leachate. Contamination has been found in the unused perched aquifer, which may be hydrologically connected to deeper, usable aquifers. A groundwater extraction treatment system was constructed in August 2011 and has been operating full-time since 2015 to contain and treat the groundwater contamination.

Project Site

The Project site is currently developed as a mobile home park which dates back to 1975 (Appendix G-1). Prior to use as a mobile home park, the Project site included a few residential homes and agricultural plots. Because of the regulatory database cases located adjacent and near the Project site, as well as the general historical industrial activity of the area, a limited Phase II soil and soil gas sampling investigation was also conducted.

Shallow Soil and Soil Gas Sampling at Project Site

As part of the evaluation to determine the potential presence of legacy contaminants in the subsurface, surface soils and soil gas samples were collected for laboratory analysis. The samples were collected at 12 different boring locations with a total of 48 soil samples collected. The collected samples were then run through a conversion process in order to obtain soil gas samples (Appendix G-1). A total of 24 of the soil samples (two from each boring) were analyzed for organochlorine pesticides, and 12 soil samples (one from each boring) were analyzed for VOCs and Title 22 Metals at an off-site accredited environmental laboratory. In addition, one sample was analyzed for semi-volatile organic compounds, 12 samples were analyzed for polycyclic aromatic hydrocarbons, 3 samples were analyzed for total petroleum hydrocarbons (TPH), and 2 samples were analyzed for PCBs.

The analytical results were compared to the DTSC-modified screening levels (DTSC-SLs) for residential land uses. These screening levels are not considered to be cleanup threshold concentrations, but screening levels that are intended to be a health-conservative preliminary evaluation of potential risk and hazard based on planned land uses. The results of the sampling were as follows:

- None of the detected organochlorine pesticide concentrations exceeded their respective DTSC-SLs for residential soil.
- With the exception of one detection of total lead at 127 milligrams per kilogram (mg/kg), none of the detected metals exceeded their respective DTSC-SLs for residential soil. The residential DTSC-SL for total lead is 80 mg/kg.

- VOCs were not detected at concentrations above the laboratory detection limits in all 12 soil samples analyzed for such constituents, and thus were below DTSC-SLs.
- The one sample analyzed for semi-volatile organic compounds detected concentrations of benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene that were reported above the DTSC-SL for such constituents in residential soil of 1.1, 0.11, and 1.1 mg/kg, respectively.
- TPH was detected at or above the laboratory reporting limit in 3 samples with a maximum TPH gasoline concentration of 3.1 mg/kg, TPH as diesel of 331 mg/kg, and TPH as oil of 858 mg/kg, which are all below DTSC-SLs.
- Polycyclic aromatic hydrocarbons were detected at or above the laboratory reporting limits in 4 of the 12 samples. The only detection that exceeded the DTSC-SL was for benzo(a)pyrene in one sample at a concentration of 0.113 mg/kg compared to a DTSC-SL of 0.11 mg/kg.
- One PCB (Aroclor-1254) was detected at or above the laboratory reporting limit in one of the two samples analyzed for PCBs. The detected Aroclor-1254 concentration was 65.1 ug/kg which is below the DTSC-SL for residential soil of 240 ug/kg.

The analytical results for the soil gas samples are summarized as follows:

- One or more VOCs were detected at or above the laboratory reporting limits in each of the 23 soil gas samples collected at the site. Detected compounds included vinyl chloride, carbon disulfide, acetone, trans-1,2-dichloroethene, hexane, tert-butanol, 1,1-dichloroethene, cis-1,2-dichloroethene, 2-butanone, tetrahydrofuran, benzene, trichloroethylene, toluene, 4-methyl-2-pentanone, tetrachloroethylene, 2-hexanone, ethylbenzene, m,p-xylene, o-xylenes, styrene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, and naphthalene. The maximum detections of vinyl chloride, cis-1,2-dichloroethene, benzene, trichloroethylene, tetrachloroethylene, and naphthalene are considered to be elevated relative to potential human health risk for slab-on-grade buildings.[1]
- Methane was detected in 6 of the 23 soil gas probes analyzed from the site with a field meter. The detections ranged from 0.4% to 6.2%. Confirmational analysis for methane was conducted by a stationary analytical laboratory on the soil gas samples with the two highest field meter readings of 1.8% and 6.2% which revealed detections of 3.2% and 1.6%, respectively.

Schools and Daycare Centers

The public schools nearest to the Project site are the Carson Street Elementary School (161 Carson Street, Carson) located approximately 2,300 feet (0.44 miles) to the southwest of the southwest corner of the site, and Bonita Street Elementary School (21929 Bonita Street, Carson) located approximately 2,800 feet (0.53 miles) southeast of the site.

In addition, the Double Love WeeCare daycare center is located at 450 East Double Street, approximately 1,365 (0.26 miles) southwest of the southwest boundary of the site.

Airports

The nearest public use airport to the Project site is the Torrance Regional Airport (Zamperini Field) located approximately 4.5 miles southwest of the site. The Long Beach Airport is located approximately 6 miles east of the Project site. In addition, the Compton/Woodley Airport, a private airport, is located approximately 4 miles northeast of the site.

[1] The existing mobile homes currently appear to have underlying crawl spaces that, when ventilated, alters the vapor intrusion concerns compared to a slab on grade structure with habitable space above (AEC 2019).

Wildland Fire

The City of Carson (City) is a fully developed urban area that is generally not associated with wildland fires. According to the Fire Hazard Severity Zone mapping done by the CAL FIRE, the Project site is located in an incorporated city that is considered to be Non-Very High Fire Hazard Safety Zone (CAL FIRE 2021). Fire protection in the City is provided by Los Angeles County Fire Department, which is complemented in part by enforcement of Fire Code requirements contained within the Building Code.

4.7.2 Relevant Plans, Policies, and Ordinances

Federal

The following federal regulations pertaining to the hazards and hazardous materials would apply to the Project.

The primary federal agencies with responsibility for hazards and hazardous materials management include the U.S. EPA, U.S. Department of Labor Occupational Safety and Health Administration (OSHA), and the U.S. Department of Transportation (DOT). Federal laws, regulations, and responsible agencies are summarized in Table 4.7-1.

Table 4.7-1. Federal Laws and Regulations Related to Hazards and Hazardous Materials

Classification	Federal Law or Responsible Federal Agency	Description
Hazardous Waste Handling	Resource Conservation and Recovery Act of 1976 (RCRA)	Under RCRA, the U.S. Environmental Protection Agency (EPA) regulates the generation, transportation, treatment, storage, and disposal of hazardous waste from "cradle to grave." Amended RCRA in 1984, affirming and extending the "cradle to grave" system of regulating hazardous wastes. The amendments specifically prohibit the use of certain techniques for the disposal of some hazardous wastes.
	Hazardous and Solid Waste Act Toxic Substances Control Act (TSCA)	Code of Federal Regulations Title 40 Chapter 1, Subchapter R – Toxic Substances Control Act – Part 761 Polychlorinated Biphenyls (PCBs) – covers the identification and sampling requirements for PCBs for disposal purposes.
Hazardous Materials Management	Community Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act [SARA])	Imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health or the environment in the event that such materials are accidentally released.

Table 4.7-1. Federal Laws and Regulations Related to Hazards and Hazardous Materials

Classification	Federal Law or Responsible Federal Agency	Description
Hazardous Materials Transportation	U.S. Department of Transportation (DOT)	DOT has the regulatory responsibility for the safe transportation of hazardous materials. The DOT regulations govern all means of transportation except packages shipped by mail (49 CFR).
	U.S. Postal Service (USPS)	USPS regulations govern the transportation of hazardous materials shipped by mail.
Occupational Safety	Occupational Safety and Health Act of 1970	OSHA sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR).
Structural and Building Components (Lead-based paint, polychlorinated biphenyls, and asbestos)	Toxic Substances Control Act	Regulates the use and management of polychlorinated biphenyls in electrical equipment and sets forth detailed safeguards to be followed during the disposal of such items.
	United States Environmental Protection Agency (U.S. EPA)	The U.S. EPA monitors and regulates hazardous materials used in structural and building components and their effects on human health

State and local agencies often have either parallel or more stringent rules than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of federal law and its enforcement are discussed under either the state or local agency section.

State

The following state regulations pertaining to hazards and hazardous materials would apply to the Project.

California Environmental Protection Agency and Unified Program

California's Secretary for Environmental Protection has established a unified hazardous waste and hazardous materials management regulatory program (Unified Program) as required by Senate Bill 1082 (1993).

The California Environmental Protection Agency (CalEPA) oversees the implementation of the Unified Program. The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspection, and enforcement activities of six environmental and emergency response programs. The state agencies responsible for these programs set the standards for their respective programs while local governments implement the standards.

The Unified Program is implemented at the local level by 86 government agencies certified by the Secretary of CalEPA. These Certified Unified Program Agencies (CUPAs) have typically been established as a function of a local environment health or fire agency. Some CUPAs also have contractual agreements with one or more other local agencies called "participating agencies," which implement one or more program elements, under the oversight of the CUPA.

The state agency partners involved in the Unified Program have the responsibility of setting program element standards, working with CalEPA on ensuring program consistency and providing technical assistance to the CUPAs and participating agencies. The following state agencies are involved with the Unified Program:

- **CalEPA.** The Secretary of CalEPA is directly responsible for coordinating the administration of the Unified Program. The Secretary certifies Unified Program Agencies. The Secretary has certified 86 CUPAs to date. These 86 CUPAs carry out the responsibilities previously handled by approximately 1,300 state and local agencies.
- **DTSC:** provides technical assistance and evaluation for the hazardous waste generator program including on-site treatment (tiered permitting).
- **Governor's Office of Emergency Services:** responsible for providing technical assistance and evaluation of the Hazardous Material Release Response Plan (Business Plan) Program, the California Accidental Release Response Plan Programs, and carrying out Federal Emergency Management Agency requirements to prepare the State Multi-Hazard Mitigation Plan, also known as the State Hazard Mitigation Program.
- **Office of the State Fire Marshal:** responsible for ensuring the implementation of the Aboveground Petroleum Storage Act. It is also responsible for oversight of the Hazardous Material Management Plans and the Hazardous Material Inventory Statement Programs. These programs tie in closely with the Business Plan Program.
- **SWRCB:** provides technical assistance and evaluation for the underground storage tank program.

Hazardous Waste Control Act

The hazardous waste management program enforced by DTSC was created by the Hazardous Waste Control Act (California Health and Safety Code Section 25100 et seq.), which is implemented by regulations described in CCR Title 22, Social Security, Division 4.5, Environmental Health Standards for the Management of Hazardous Waste. This act implements the Resource Conservation and Recovery Act of 1976 (RCRA) "cradle-to-grave" waste-management system in California but is more stringent in its regulation of non-RCRA wastes, spent lubricating oil, small-quantity generators, transportation and permitting requirements, as well as in its penalties for violations. The act also exceeds federal requirements by mandating the recycling of certain wastes, requiring certain generators to document a hazardous waste source reduction plan, requiring permitting for federally exempt treatment of hazardous wastes by generators, and implementing stricter regulation of hazardous waste facilities.

California Department of Industrial Relations, Division of Occupational Safety and Health Administration

The California OSHA assumes primary responsibility for developing and enforcing workplace safety regulations within the state. California OSHA standards are more stringent than OSHA regulations and are presented in CCR Title 8. Standards for workers dealing with hazardous materials include practices for all industries (General Industry Safety Orders); specific practices are described for construction and hazardous waste operations and emergency response. California OSHA conducts on-site evaluations and issues notices of violation to enforce necessary improvements to health and safety practices. CCR Title 8 also includes standards for the identification, abatement, and handling of ACM (8 CCR 1529 and 5208) and LBP (8 CCR 1532.1).

California Highway Patrol and Department of Transportation

The California Highway Patrol and Department of Transportation (Caltrans) are the enforcement agencies responsible for hazardous materials transportation regulations. Hazardous materials and waste transporters are responsible for complying with all applicable packaging, labeling, and shipping regulations. California Vehicle Code, Division 13, Chapter 5, Article 1 Sections 31303–31309 regulate the transport of hazardous materials. The

provisions of this section apply to the highway transportation of hazardous materials and hazardous waste and include restrictions on labeling/placards, transportation routes, and other measures to ensure safe transport of regulated materials.

State Water Resources Control Board

The SWRCB has primary responsibility to protect water quality and supply through the respective Regional Water Quality Control Boards (RWQCBs). As described in Section 4.8, Hydrology and Water Quality, RWQCBs are authorized by the Porter-Cologne Water Quality Control Act of 1969 to protect the waters of the state. The RWQCBs provide oversight for sites where the quality of groundwater or surface waters is threatened. Extraction and disposal of contaminated groundwater due to investigation/remediation activities or due to dewatering during construction require a permit from the RWQCBs if the water were discharged to storm drains, surface water, or land.

California Code of Regulations Title 23, Chapter 15, requires that non-hazardous liquid (greater than 42 gallons) or solid (greater than 10 cubic yards) waste must be reported to the RWQCB. Domestic wastewater and refuse releases are required to be reported under different non-Chapter 15 regulations.

California Fire Code

The 2016 California Fire Code is published by the California Building Standards Commission and incorporates by adoption the 2015 International Fire Code of the International Code Council. The California Fire Code is contained as Part 2 of the California Building Code and includes minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations. The City has adopted the California Fire Code with amendments.

Local

The following local/regional regulations pertaining to Hazards and Hazardous Materials would apply to the Project.

Los Angeles County Building Code

The Los Angeles County Building Code has adopted the California Building Code with local amendments. The County code includes Section 110.4 which requires that buildings or structures adjacent to or within 300 feet (60.96 meters) of active, abandoned, or idle oil or gas well(s) be provided with methane gas protection systems. If the project site contains or lies within 300 feet of active, abandoned, or idle oil or gas wells, the issue needs to be addressed in accordance with Public Works, Environmental Programs Division requirements for issuance of necessary permits.

The Los Angeles County Building Code, Section 110.3, requires that a building or structure located on or within 1,000 feet (304.8 meters) of a landfill containing decomposable material must be protected against landfill gas intrusion. The Project site is located within 1,000 feet of the Cal Compact Landfill and will require compliance with Section 110.3.

In addition, for any operation that includes the construction, installation, modification or removal of underground storage tanks (Los Angeles County Code Title 11, Division 4), industrial waste treatment or disposal facilities, and/or stormwater treatment facilities, Public Works, Environmental Programs Division must be contacted for required

approvals and operating permits. Specific industry types will also be subject to registration and inspections related to implementation of best management practices to prevent stormwater related pollution (Los Angeles County Code, Chapter 12.80).

South Coast Air Quality Management District and Rule 1403

Asbestos is a carcinogen and is categorized as a hazardous air pollutant by the EPA. The EPA has delegated the authority to enforce the federal asbestos regulations to the SCAQMD. Air Quality Management District Rule 1403, adopted by the SCAQMD on October 6, 1989, establishes survey, notification, and work practice requirements to prevent asbestos emissions from emanating during building renovation and demolition activities. The SCAQMD also works with the California Air Resources Board and is responsible for developing and implementing rules and regulations regarding air toxins on a local level.

County of Los Angeles Health Hazardous Materials Division

In 1982, the Los Angeles County Board of Supervisors established the Hazardous Materials Control Program in the Department of Health Services for the inspection of businesses generating hazardous waste. In 1991, the program merged into the Fire Department and it became the Health Hazardous Materials Division (HHMD). All Hazardous Material Specialists are sworn and badged Los Angeles County Deputy Health Officers. In 1988, Los Angeles County adopted the Los Angeles County Hazardous Waste Management Plan, which was subsequently approved by the State Department of Health Services. The City subsequently adopted the Plan.

In 1997, the HHMD became a CUPA to administer the following programs within Los Angeles County: the Hazardous Waste Generator Program, the Hazardous Materials Release Response Plans and Inventory Program (also referred to as Hazardous Materials Business Plans), the California Accidental Release Prevention Program, the Aboveground Storage Tank Program and the Underground Storage Tank Program. HHMD is responsible for protecting public health and the environment throughout Los Angeles County from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight. The HHMD is a division of the Department's Prevention Services Bureau, and includes the following sections and units:

- Inspection Section
- Emergency Operations Section
- Special Operations Section
- Administration/Planning Section

Hazardous Materials Business Plans (HMBPs) are required for any facility that will handle a hazardous material or a mixture containing a hazardous material that has a quantity at any one time during the reporting year that is equal to, or greater than, 55 gallons for materials that are liquids, 500 pounds for solids, or 200 cubic feet for compressed gas, as defined in subdivision (i) of Section 25501 of the California Code (Health and Safety Code, Division 20, Chapter 6.95, Article 1, Business and Area Plans [25500–25519]). Other requirements include submitting a chemical inventory information sheet pursuant to Section 11022 of Title 42 of the United States Code. As the CUPA agency, HMMD would be responsible for ensuring compliance with these regulations.

General Plan

The Safety Element of the General Plan provides the following goals and policies potentially relevant to the Project:

Goal SAF-4: Minimize the threat to the public health and safety and to the environment posed by a release of hazardous materials.

Policy SAF-4.1: Strictly enforce federal, state and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.

Policy SAF-4.2: Periodically review and amend the appropriate ordinances which regulate the storage and handling of hazardous materials to conform with the standards and definitions of the state and other regulatory agencies.

Policy SAF-4.3: Through the planning and business permit processes, continue to monitor the operations of businesses and individuals which handle hazardous materials.

Policy SAF-4.7: Continue to implement the goals, policies and programs identified in the City's Household Hazardous Waste Element.

4.7.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts related to hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hazards and hazardous material would occur if the Project would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. 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.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as result, would it create a significant hazard to the public or the environment.
5. 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.
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.
8. Result in a cumulatively considerable impact with regard to hazards or hazardous materials.

Project Design Features

PDF-HAZ-1 **Soil Management Plan.** Prior to initiating any ground disturbing activities on the Project site, the Project Applicant shall prepare a Soil Management Plan that is submitted and approved by the Los Angeles County Health Hazardous Materials Division (HHMD). The Soil Management Plan shall be prepared by a qualified environmental consultant, consistent with the findings of the June 17, 2019 AEC Phase I and II Environmental Site Assessment, or any updates to that report.

During construction, the contractor shall implement the Soil Management Plan. If unidentified or suspected contaminated soil or groundwater evidenced by stained soil, noxious odors, or other factors, is encountered during site preparation or construction activities on any portion of the Project site, the contractor shall stop in the excavation area of potential contamination and notify HHMD. Following oversight from HHMD, the applicant shall retain a qualified professional to collect soil samples to confirm the type and extent of contamination if deemed necessary by HHMD.

If contamination is confirmed to be present, any further ground disturbing activities within areas of identified or suspected contamination shall be conducted according to a site-specific health and safety plan, prepared by a California state licensed professional. The contractor shall follow all procedural direction given by HHMD and in accordance with the Soil Management Plan to ensure that suspect soils are isolated, protected from runoff, and disposed of in accordance with transport laws and the requirements of the licensed receiving facility.

If contaminated soil or groundwater is encountered and identified constituents exceed human health risk levels, ground disturbing activities shall not recommence within the contaminated areas until remediation is complete and a "no further action" letter is obtained from the appropriate regulatory agency or direction is otherwise given that construction can commence. The Project Applicant shall submit the "no further action" letter or equivalent notification to the City prior to resumption of any ground disturbing activity on the relevant portion of the Project site.

4.7.4 Impacts Analysis

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

Less-than-Significant Impact

Construction

Project-related construction activities would include demolition and removal of existing structures on the Project site and use of hazardous materials during construction of new buildings, structures, and other features of the proposed Project. The potential for exposure of the public or the environment to hazardous materials during these construction activities is addressed in the following discussion.

Exposure to Hazards in Existing Structures

The proposed Project would include demolition of existing structures of varying ages, some of which were built prior to 1978 and, as a result, could contain hazardous building materials. Exposure to hazardous building materials

during demolition, including ACMs, LBP, or PCBs, mercury and other hazardous materials in structures would only occur during demolition activities, but could result in adverse health effects if not managed appropriately as required by existing laws and regulations. Once the structures have been removed, there would be no further exposure during operation of the proposed Project.

As described under Section 4.7.2, existing federal, State, and local regulations require demolition or renovation activities that may disturb or require the removal of materials that consist of, contain, or are coated with ACM, LBP, PCBs, mercury, and other hazardous materials to be inspected and/or tested for the presence of hazardous materials. Further, all hazardous materials must be managed and disposed of in accordance with laws and regulations described in the Regulatory Setting by licensed contractors.

The identification, removal, and disposal of ACM is regulated under 8 CCR 1529 and 5208. The identification, removal, and disposal of LBP is regulated under 8 CCR 1532.1. For both ACM and LBP, all work must be conducted by a State-certified professional. If ACM and/or LBP is determined to exist on site, a site-specific hazard control plan must be prepared and submitted to the appropriate agency detailing removal methods and specific instructions for providing protective clothing and equipment for abatement personnel (SCAQMD for asbestos and California OSHA for lead). If necessary, a state-certified LBP and an asbestos removal contractor would be retained to conduct the appropriate abatement measures as required by the plan. Wastes from abatement and demolition activities would be disposed of at a landfill(s) licensed to accept such waste. Once all abatement measures have been implemented, the contractor would conduct a clearance examination and provide written documentation to the City that testing and abatement have been completed in accordance with all federal, state, and local laws and regulations.

In the case of PCBs, the identification, removal, and disposal is regulated by the EPA under the Toxic Substances Control Act (Title 40 Chapter 1 Subchapter R Part 761) and California regulations (22 CCR 66263.44). Electrical transformers and older fluorescent light ballasts not previously tested and verified to not contain PCBs must be tested. If PCBs are detected above action levels, the materials must be disposed of at a licensed facility permitted to accept the materials. Upon completion of abatement measures, if applicable, the contractor would provide written documentation to the City that testing and abatement have been completed in accordance with all federal, state, and local laws and regulations.

In the case of mercury in fluorescent light tubes and switches, the identification, removal, and disposal is regulated under 22 CCR 67426.1–67428.1 and 66261.50. Under these regulations, the light tubes must be removed without breakage and disposed of at a licensed facility permitted to accept the materials. Upon completion of abatement measures, if applicable, the contractor would provide written documentation to the City that testing and abatement have been completed in accordance with all federal, state, and local laws and regulations.

The proposed Project would involve demolition and removal of structures of varying ages which could potentially contain hazardous building materials. However, pursuant to federal, state, and local regulations, the demolition permit process would require appropriate surveying, identification and disposal of any identified hazardous building materials by licensed contractors. Therefore, exposure to asbestos containing materials, LBP and/or other hazardous building materials that would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials would be **less than significant**.

Use of Hazardous Materials During Construction

Construction activities would also likely require the use of limited quantities of hazardous materials such as fuels, oils, and lubricants for construction equipment; paints and thinners; and solvents and cleaners. These hazardous

materials are typically packaged in consumer quantities and used in accordance with manufacturer recommendations and would be transported to and from the Project site. The improper handling and transport of hazardous materials could result in adverse health effects to workers or the public.

As discussed in the Regulatory Setting, transportation of hazardous materials is regulated by the DOT and Caltrans. Together, federal and State agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the exposure of hazardous materials. In addition, businesses that use hazardous materials, including construction companies, are required to prepare and implement HMBPs describing procedures for the handling, transportation, generation, and disposal of hazardous materials. As the CUPA agency, HMMD would be responsible for ensuring compliance with these regulations including, but not limited to, the Hazardous Waste Control Act, the Hazardous Waste Generator Program, the Hazardous Materials Release Response Plans and Inventory Program, the California Accidental Release Prevention Program, and the Aboveground Storage Tank Program.

As previously discussed, a comprehensive set of federal, state, and local laws and regulations regulate the transportation, management, and disposal of hazardous materials and wastes so as to reduce the potential risks of human exposure. For these reasons, the potential for construction of the proposed Project to result in a significant hazard due to exposure of the public or the environment to hazardous materials or wastes to through the routine transport, use, or disposal of hazardous materials would be a **less-than-significant impact**.

Operation

The use of common hazardous materials would occur as part of the operation of the proposed Project, primarily associated with maintenance activities. Hazardous chemicals common in other relatively similar residential and commercial land uses include paints, lubricants, solvents, cleaning supplies, and relatively small quantities of fuels, oils, and other petroleum-based products. Activities such as landscaping, can also become sources of releases of hazardous materials with pesticides and herbicides.

The hazardous materials that would be associated with the proposed Project are typically handled and transported in small quantities, and because the health effects associated with them are generally not as serious as industrial uses, operation of a majority of the new uses at the site would not cause an adverse effect on the environment with respect to the routine transport, use, or disposal of general office and household hazardous materials. The existing regulatory framework requires appropriate training of employees in the use, storage, and disposal of any hazardous materials and wastes. As required by the HHMD, any business that would store hazardous materials and/or waste at its site would be required to submit business information and hazardous materials inventory forms contained in Hazardous Materials Management Plan and Hazardous Materials Business Plan. In addition, all hazardous materials handlers are subject to inspection every 3 years. The HHMD, as the CUPA, requires all new commercial and other users to follow applicable regulations and guidelines regarding storage and handling of hazardous waste. All hazardous materials are required to be stored and handled according to manufacturer's directions and local, state and federal regulations including the Hazardous Waste Control Act (California Health and Safety Code Section 25100 et seq.), which is implemented by regulations described in CCR Title 22. With adherence to existing regulatory requirements, the impact of the routine transport, use or disposal of hazardous materials associated with proposed uses at the site would be a **less-than-significant impact**.

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?

Less-than-Significant Impact

Construction

As previously noted, construction activities would require the use of limited quantities of hazardous materials that are normal requirements of the construction process, including fuels, oils, and lubricants for construction equipment; paints and thinners; and solvents and cleaners. These materials would be transported to and from the Project site for use during construction activities. The improper handling and transport of hazardous materials could result in accidental release of hazardous materials, thereby exposing the public or the environment to hazardous materials.

As discussed in Section 4.7.2, Relevant Plans, Policies, and Ordinances, the transport of hazardous materials is regulated by the DOT and Caltrans. The transport regulations ensure safe transport of the regulated materials by addressing how hazardous materials are labeled, identifying approved transport routes, and include provisions that restrict containment during highway transportation of hazardous materials and wastes.

Construction activities would disturb more than one acre and, thus, would be required to implement requirements of the National Pollutant Discharge Elimination System General Construction Permit. This permit requires implementation of best management practices (BMPs) that would include measures to address the safe handling of hazardous materials, and in the unlikely event of an inadvertent release, also requires spill response measures to contain any release of hazardous materials. The use of construction BMPs implemented as part of a Stormwater Pollution Prevention Plan (discussed further in Section 4.8), as required by the National Pollutant Discharge Elimination System General Construction Permit, would minimize the potential adverse effects from accidental release of hazardous materials or wastes.

In general, aside from refueling needs for heavy equipment, the hazardous materials typically used on a construction site would be brought onto the site by the construction contractor, packaged in consumer quantities, and used in accordance with manufacturer recommendations. The overall quantities of these materials on the site at any one time would not result in large bulk amounts that, if spilled, could cause significant soil or groundwater contamination. If a spill of hazardous materials on the construction sites were to occur, the spilled materials would be localized because of the relatively small quantities involved and would be cleaned up in a timely manner in accordance with identified BMPs.

As previously described, refueling activities of heavy equipment would be conducted in a dedicated and controlled area with secondary containment and protective barriers to minimize any potential hazards that might occur with an inadvertent release. Given the required protective measures (i.e., BMPs) and the quantities of hazardous materials typically needed for construction projects, such as the proposed Project, the threat of exposure to the public or contamination to soil and/or groundwater from construction-related hazardous materials is considered a **less-than-significant impact**.

Operation

Operation of the proposed Project would involve the use of relatively small quantities of common hazardous materials, including paints and thinners, cleaning solvents, and fuels, oils, and lubricants that are commonly associated with the residential and commercial land uses. These materials would be typically packaged in consumer quantities, as compared to bulk deliveries for industrial land uses, and used in accordance with manufacturer recommendations.

Pursuant to the provisions of programs administered by the Los Angeles County HHMD, storage of all hazardous materials on site would be required to adhere to a site-specific HMBPs. The preparation and implementation of a HMBP would be required for the site and would identify safe measures to store, handle, and dispose of hazardous materials such that accident and upset conditions are minimized. The HMBP would also include spill response measures to ensure that in the unlikely event that a release does occur, protocols would be implemented to contain and control any accidental release in a manner that is protective of human health and the environment. Such protocols could include employee training, the location of absorbent materials to contain a release, and notification requirements to ensure that human health and the environment is protected from any exposure. The adequacy of and compliance with the HMBP would be overseen and enforced by the HHMD. Because a comprehensive set of enforced laws and regulations govern the transportation and management of hazardous materials to reduce the potential hazards to the public and environment, this impact would be **less than significant**.

Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. As noted above in Section 4.7.1, Existing Conditions, there are no schools located within a one-quarter mile of the Project site. The Double Love WeeCare daycare center is located approximately 1,365 (0.26 miles) from the site; however, based on the proposed land uses, development of the proposed Project would not include any substantive hazardous emissions that would be likely to adversely affect this daycare center even if considered within the one-quarter mile limit. Therefore, **no impacts** associated with emitting hazardous emissions or handling hazardous or acutely hazardous materials within 0.25 miles of a school would occur.

Would the Project be located on a site that is included on a list of hazardous materials 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?

Less-than-Significant Impact. The Phase I and II report determined that the Project site itself was not identified in any of the environmental databases reviewed (Appendix G-1). However, due to the proximity of the site to the former landfill (Cal Compact Landfill) and history of industrial uses in the area, a Phase II investigation was recommended and completed.

While there are no known releases within the Project site, any legacy contaminants present in subsurface materials could adversely affect future occupants, visitors or workers through contact with contaminated soils during excavation or other ground disturbing activities. The proposed grading would seek to reuse all excavated materials on site with no off-site disposal. In addition to the potential for legacy contaminants in the soil, there is a potential hazard of exposure to hazardous materials through future vapor intrusion into proposed Project structures. As noted previously, however, the Project site is located within 1,000 feet of the former Cal Compact Landfill and would require compliance with Section 110.3 of the Los Angeles County Building Code to protect structures from any landfill gas intrusion. Typically, the protection comes in the form of installing a vapor barrier beneath the structure foundation that prevents any vapor intrusion from adversely affecting occupants. To address the potential for any methane gas intrusion, a conventional methane mitigation system would be installed beneath all proposed buildings at the Project site as part of the proposed Project. As discussed in Section 3, Project Description, the systems will likely consist of passive sub-slab venting, spray applied barriers and installation of vertical vent risers along the sides or through the newly constructed buildings. The methane mitigation system would also serve as an effective means of preventing vapor intrusion of VOCs or other hazardous gas compounds, if present.

AEC collected 2 soil samples from different depths in 12 borings at the Project site to assess the potential presence of legacy contaminants across the site. In addition, a total of 23 soil gas samples were collected at the site. All soil and soil gas samples were analyzed by a certified analytical laboratory and the results were compared to regulatory screening levels for residential land uses. The results of the analytical testing revealed various contaminants of concern in the soil that were above residential screening levels (Appendix G-1). TPH was detected in soil samples that were considered to be at "nuisance condition" levels and not at levels that would be considered a substantive threat to human health or the environment (i.e., not at levels above regulatory screening levels) (Appendix G-1). TPH will also biodegrade naturally over time and with the proposed grading could end up being diluted with the reworking of the soils. Additionally, with implementation of **PDF-HAZ-1**, Project construction would require implementation of a soil management plan that provides sufficient protocols to address any discovered soils that show evidence of contamination (i.e., odor or discoloration) in a manner that is protective of construction workers and the public. In addition, Project construction would be required to implement Section 110.3 of the Los Angeles County Building Code to protect future occupants from any vapor intrusion hazards. Therefore, with adherence to existing regulatory requirements including Section 110.3 of the Building Code and installation of a conventional methane mitigation system, the potential impact from any legacy contaminants would be considered **less than significant.**

For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?

No Impact. As noted above in Section 4.7.1, Existing Conditions, the Project site is not located within 2 miles of a public airport, and as a result, is not included as part of a land use plan associated with an airport. Therefore, **no impacts** would occur.

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

Less-than-Significant Impact. In accordance with the Disaster Mitigation Act of 2000, the City adopted the City of Carson Natural Hazards Mitigation Plan for planning related to natural, man-made, and technological hazards. The City's Mitigation Plan was adopted by the Federal Emergency Management Agency on September 10, 2013. The Mitigation Plan generally provides a means to promote public policy designed to protect citizens, critical facilities, infrastructure, private property, and environment from natural hazards.

The overall mitigation goals of the plan are to do the following:

- Protect life, environment, and property
- Provide public awareness
- Preserve, rehabilitate, and enhance natural systems
- Strengthen communication and coordinate participation among agencies
- Strengthen emergency services including emergency operations plans and procedures

The proposed Project would be constructed in accordance with current design standards and building codes as discussed in Section 4.5, Geology and Soils, which is therefore consistent with the Mitigation Plan. Implementation of these standards and codes would minimize the loss of life and property from natural hazard events and protect public health and safety. As a development project, the proposed Project would not interfere or impair with the City's ability to increase public awareness or make any improvements to emergency services (also discussed more

fully in Section 4.12, Public Services and Recreation) and warning systems. Therefore, the proposed Project would not substantively impair or interfere with the emergency response plan or evacuation plan and the potential impact is **less than significant**.

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

No Impact. The Project site is located in a developed urban area that is not subject to wildland fires. The proposed Project would be required to adhere to local and State Fire Code building requirements which include fire suppression and egress requirements that would minimize any fire hazards. Therefore, there would be **no impact** related to wildland fires and this issue is not discussed further.

Would the Project have cumulatively considerable impacts with regards to hazards or hazardous materials?

Less-than-Significant Impact. Hazardous materials and hazard impacts are generally localized to specific sites and do not combine with one another in a way to create a greater or more severe hazard, in large part due to the relative infrequencies and the variances in timing, as well as the commonly localized nature of incidents/hazards. Impacts relative to hazardous materials usually depend on the nature and extent of the hazardous materials release, and existing soil and groundwater conditions at the time of the release. As a result, hazardous materials incidents could only be cumulative if two or more hazardous materials releases overlapped spatially and contemporaneously in such a way as to become cumulatively considerable.

The timeframe during which the proposed Project could contribute to cumulative hazards and hazardous materials effects includes the construction and operational phases. The proposed Project in conjunction with other cumulative projects would include the use, storage, and disposal of varying quantities of hazardous materials for both construction and operation. The proposed Project does not include any substantive emissions of hazardous materials such as might be associated with industrial land uses (e.g., manufacturing, chemical processing, handling of bulk quantities of hazardous materials or wastes). Just as with the proposed Project, all cumulative projects including commercial uses/businesses would be required to submit business information and hazardous materials inventory forms contained in a HMMP. The HHMD, as the CUPA, and other CUPA agencies for the cumulative projects outside of HHMD jurisdiction, requires all new commercial and other users to follow applicable regulations and guidelines regarding storage and handling of hazardous waste. All hazardous materials are required to be stored and handled according to manufacturer's directions and local, state, and federal regulations. With adherence to existing regulatory requirements, releases from routine transport, use or disposal of hazardous materials would be minimized, and in the unlikely event of a release, would likely be localized in extent.

As previously noted, adherence to the regulatory requirements would ensure that incidents at the proposed Project and other cumulative projects within a 1-mile radius are infrequent, and thus unlikely to occur simultaneously in a way that could result in the public or environment being exposed to multiple releases of hazardous materials. For the reasons described above, the proposed Project, in conjunction with other cumulative projects, would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, this cumulative impact would be **less than significant**.

4.7.5 Mitigation Measures

The proposed Project would not result in significant impacts; therefore, no mitigation is required.

4.7.6 Level of Significance After Mitigation

All impacts were determined to be **less than significant**. No mitigation is required.

4.7.7 References

CAL FIRE (California Department of Forestry and Fire Protection). 2021. "Fire Hazard Severity Zone Maps." Accessed January 2022. https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/.

EPA (United States Environmental Protection Agency). 2020. "EPA Actions to Protect the Public from Exposure to Asbestos." Updated December 30, 2020. https://www.epa.gov/asbestos/us-federal-bans-asbestos.

EPA. 2021. "Policy and Guidance for Polychlorinated Biphenyl (PCBs)." Updated December 9, 2021. https://www.epa.gov/pcbs/policy-and-guidance-polychlorinated-biphenyl-pcbs.

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4.8 Hydrology and Water Quality

This section describes the existing hydrology and water quality conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project).

Information contained in this section is based on the Water Resources Technical Report which was prepared for the Project site by PSOMAS on November 2, 2020 and revised August 12, 2021 (Appendix H) and the Water Supply Assessment prepared by EKI Environment & Water dated October 6, 2021 (Appendix L-1). Other documentation used in this analysis includes mapping compiled by the Federal Emergency Management Agency (FEMA). Other sources consulted are listed in Section 4.8.7, References Cited.

4.8.1 Existing Conditions

This section describes the existing conditions on the Project site and vicinity and identifies the resources that could be affected by the Project.

Regional Watershed

The Project is located within the Dominguez Channel Watershed, which covers approximately 70,000 acres and is located in the southern portion of the Los Angeles Basin. Approximately 43,400 acres of the watershed drains to the 15.7-mile-long Dominguez Channel, which begins in Hawthorne and discharges into the East Basin of the Los Angeles Harbor. The remaining approximately 26,600 acres, which include Wilmington Drain and Machado Lake, drain directly to the Los Angeles Harbor independently of Dominguez Channel. Over 90% of the watershed is developed. Residential use covers about 41%, and another 44% is industrial, commercial, and transportation-related. Overall, the watershed is approximately 61% impervious. Constructed waterways are predominant; however, some small, natural creeks are located in the hills of the Palos Verdes Peninsula (LA Sanitation 2021). The Dominguez Channel is located approximately 0.25 miles northeast of the Project boundary.

Topography

The Project site and surrounding area are characterized as an urban, developed commercial and residential area, with limited pervious surfaces. Historically, the Project site was once fully engulfed within a large slough that was as much as 10 feet below the current grade but started to be filled in sometime prior to 1930. A review of topographic maps and historic aerials show the slough subject to varying levels of reclamation, as a smattering of structures and infrastructure appear on the Project site from the 1930s through the 1960s. The Project site was officially reclaimed in 1972–1973 using recycled materials to fill and level the site and develop road bases for the current mobile home park. Fill dirt was trucked in from excavation sites and large chunks of concrete from highway improvements and similar projects were brought to the site to be crushed into cement gravel to create the road bases. These activities created a flat and level surface that remains today.

Existing Drainage Conditions

The existing 27.2-acre Project site is currently developed with a mobile home park that is approximately 99% covered by impervious surfaces. Stormwater runoff currently flows into v-gutters throughout the Project site and is collected by various catch basins that drain to a Los Angeles County Flood Control District storm drain line that runs

through the middle of the Project site. The County of Los Angeles (County) storm drain line is a 75-inch reinforced concrete pipe that drains into the nearby Torrance Lateral Drainage Channel, which is connected to the Dominguez Channel. Stormwater runoff in areas directly adjacent to Grace Avenue and Avalon Boulevard flows to the street curb and gutter system and does not directly discharge into the County storm drain. Additionally, an area at the southwest corner of the site flows into private property.

The Los Angeles County Department of Public Works (LACDPW) Hydrology Manual requires that a storm drain conveyance system be designed for a 25-year storm event (Q25) and that the combined capacity of a storm drain and street flow system accommodate flow from a 50-year storm event (Q50). The existing site peak flows generated for the site for storm events ranging from 5-year to 100-year is shown in Table 4.8-1, Existing Hydrology Results (Appendix H).

Table 4.8-1. Existing Hydrology of the Site

Storm Event	Existing (Q total cfs)
5-Year	26.99
10-Year	35.65
25-Year	46.54
50-Year	54.78
100-Year	63.68

Notes: Q = Total Flow; cfs = cubic feet per second.

Surface Water Quality

Stormwater runoff is a significant contributor to local and regional pollution. Urban stormwater runoff is the largest source of unregulated pollution in the waterways and coastal areas of the United States. Federal, state, and regional regulations require the City of Carson (City) to control the discharge of pollutants to the storm drain system, including the discharge of pollutants from construction sites and areas of new development or significant development (City of Carson 2002).

The Project site is located in the Dominguez Channel and Los Angeles/Long Beach Harbors Watershed Management Area, which is characterized by a generally low topographic gradient. The Dominguez Channel drains a highly industrialized area with numerous sources of pollution resulting from polycyclic aromatic hydrocarbons and contains remnants of persistent legacy pesticides, including dichlorodiphenyltrichloroethane (DDT), as well as polychlorinated biphenyls, all of which contribute to poor sediment quality both within the channel and in downstream Inner Harbor areas. Although highest in the Dominguez Channel Estuary and Inner Harbor Consolidated Slip sediments, DDT has historically been present throughout the harbor. Oil pumping has a historical presence in the area, and there are existing wells still in operation. Metals remain elevated at some locations in the sediments of the Inner Harbor. The Dominguez Channel is listed on the Clean Water Act Section 303(d) list as impaired due to the prevalence of bacteria, metals/metalloids, toxicity, pesticides and other organics.

In accordance with state policy for water quality control, the Los Angeles Regional Water Quality Control Board (RWQCB) employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (LARWQCB 2014) has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. The existing and proposed beneficial uses of water bodies downstream of the Project site (previously described) include ground water recharge, warm freshwater habitat, water contact recreation, and non-contact water recreation; potential uses include municipal and domestic supply, industrial service supply, and wildlife habitat.

Once a water body has been listed as impaired on the 303(d) list, a total maximum daily load (TMDL) for the constituent of concern (pollutant) must be developed for that water body. A TMDL is an estimate of the daily load of pollutants that a water body may receive from point sources, non-point sources, and natural background conditions (including an appropriate margin of safety), without exceeding its water quality standards. Those facilities and activities that are discharging into the water body, collectively, must not exceed the TMDL. In general, dischargers within each watershed are collectively responsible for meeting the required reductions and other TMDL requirements by an assigned deadline. TMDLs that have been established for the Dominguez Channel, Dominguez Channel Estuary, and Los Angeles Inner/Outer Harbor include copper, indicator bacteria, lead, toxicity, zinc, benthic community effects, benzo(a)anthracene, benzo(a)pyrene (3,4-benzopyrene -7-d), chrysene (C1-C4), polychlorinated biphenyls, phenanthrene, pyrene, and toxicity (SWRCB 2017).

Enhanced Watershed Management Program

Based on the Enhanced Watershed Management Program Work Plan, Dominguez Channel Watershed Management Area (City of Los Angeles 2015), available receiving water monitoring data were used to evaluate potential stormwater and non-stormwater discharge data. Water quality data was obtained from the LACDPW, Port of Los Angeles, and City of Los Angeles Department of Public Works, Bureau of Sanitation. Monitoring data were available from the Dominguez Channel, Dominguez Channel Estuary, the Consolidated Slip (of the Los Angeles Inner Harbor), the Inner Harbor, Outer Harbor, Fish Harbor, and the Wilmington Drain. The assessment of discharge quality is considered tentative pending completion of a Coordinated Integrated Monitoring Program. The data were compared to water quality criteria to evaluate the number of exceedances. Water quality data from the Dominguez Channel and Torrance lateral included exceedances of dissolved metal, toxicity, diazinon, ammonia, cyanide, dissolved oxygen, E. coli, and fecal coliform. Point sources include stormwater and urban runoff flowing through municipal separate storm sewer systems (MS4s), as well as other MS4 discharges, such as those from refineries, generating plants, port operations, and the Terminal Island Water Reclamation Plant, which discharges into the Outer Harbor. Nonpoint sources include contaminated sediments already in receiving waters and atmospheric deposition.

The Dominguez Channel Watershed Management Area also contains two Superfund sites, which have historically been large contributors of organic pollutants, including the Montrose Chemical Corporation site and the Del Amo Facility site. The Montrose site manufactured DDT from 1947 to 1982, and the compound is still present in soils around the site. Stormwater runoff from this site, if exposed, can contain DDT from these soils. However, the site is currently paved and includes a maintenance plan under Initial Action, taken under the Environmental Protection Agency (EPA) oversight in 1985. The Del Amo facility was once the center of large-scale production of synthetic rubber, which included a styrene plant and a butadiene plant. Groundwater and soils in the area are contaminated with volatile organic compounds, polycyclic aromatic hydrocarbons, and minor amounts of pesticides, polychlorinated biphenyls, and heavy metals. Most of the Del Amo facility has been redeveloped into an industrial business park and surficial soils are generally not exposed (City of Los Angeles 2015).

The water quality issues identified for the Dominguez Channel and Los Angeles Harbor are expected to be addressed with best management practices (BMPs) to address existing TMDLs. Regional stormwater management plans were evaluated in an effort to identify whether planned projects met Enhanced Watershed Management Plan criteria for regional projects and represent feasible implementation options. The Dominguez Channel Watershed Management Plan Group then incorporated applicable BMPs into the Enhanced Watershed Management Plan, thus replacing the previous plans, to address the various TMDLs. The Enhanced Watershed Management Plan identifies projects to be implemented, including the following (City of Los Angeles 2015):

(1) Minimum control measures, excluding implementation of low-impact development (LID) ordinances for new and re-development

(2) LID ordinance implementation for new and re-development processed

(3) Regional projects

(4) Distributed projects, which are primarily green streets

The Enhanced Watershed Management Plan is part of an adaptive management process of the MS4 permit, which states that every 2 years the plan will adapt to become more effective, based on progress achievements, re-evaluation of water quality priorities, and availability of new information. Currently, most of the projects identified in the Enhanced Watershed Management Plan are not explicitly funded from a dedicated revenue source. Obtaining funds for all of the activities identified in the plan is anticipated to take many years. A compliance schedule has been developed to address water quality issues, based on TMDL categories (City of Los Angeles 2015). As previously discussed, most of the TMDLs were delisted from the 303(d) list in 2012 (California Water Board 2016), indicating that water quality has improved downstream of the Project site.

The Dominguez Channel Watershed Management Area Group has also established an outfall monitoring program associated with non-stormwater discharges, which is intended to be a collaborative effort between all of the agencies in the group. As specified in the Coordinated Integrated Monitoring Program, the Dominguez Channel Watershed Management Area Group will report non-stormwater discharges that occur in their jurisdiction and actions taken to evaluate if those discharges are persistent, exempt and, if non-exempt, actions taken and/or BMPs implemented to eliminate those discharges. Per Part III.2 of the MS4 Permit, "exempt non-stormwater discharges often include non-emergency firefighting activities, discharges from drinking water supplies, dewatering of lakes, landscape irrigation, swimming-pool discharges, decorative fountain dewatering, car washes, and street/sidewalk washing" (City of Los Angeles 2015).

Groundwater

Regionally, the Central Basin and the West Coast Groundwater Basin are the two groundwater basins underlying the City of Carson. Specifically, the Project site is underlain by the West Coast Groundwater Basin. The Newport-Inglewood Fault Zone (refer to Section 4.5, Geology and Soils, of this Environmental Impact Report) serves as a water barrier separating the Central Basin and the West Coast Basin. This groundwater barrier passes through the north–central portion of the City in a southeast direction. Groundwater flows within the City generally in a southwest direction (City of Carson 2002).

In accordance with the Sustainable Groundwater Management Act (SGMA), the California Department of Water Resources has classified each basin (Central Basin and West Coast Basin) in regard to prioritizing the completion of a Groundwater Sustainability Plan (GSP). Both the Central Basin and West Coast Basin have a very low priority regarding enacting a GSP (CDWR 2020). In addition, both groundwater basins are adjudicated, in accordance with the West Coast Basin Judgment, and thus have a managed groundwater extraction rate, reducing the potential for over-extraction (City of Carson 2002).

Development of the yield of the Central Basin is dependent on the use of local storm runoff, imported and recycled water for groundwater recharge, and the injection of imported water from the backside of the Alamitos Seawater Intrusion Barrier. The Central Basin is replenished through subsurface flows from the San Gabriel Valley and precipitation that falls directly on the Montebello Forebay and percolates into the Basin (City of Carson 2002).

Groundwater for the West Coast Basin originates from subsurface flow from the Central Basin and injection along with the seawater barrier system. Virtually all of the major rivers flowing through the Central and West Coast Basins have been developed into a comprehensive system of dams, flood control channels and percolation ponds for artificially recharging the basins. Los Angeles County studies have indicated that 90% of the rain and runoff in the

county either percolates naturally into the ground or are captured in the flood control reservoirs for later release to recharge groundwater basins. The replenishment of Central and West Coast Basins with recycled water is an important source of water (City of Carson 2002).

Several aquifers are present in the vicinity of the City, including the Gage/Gardena, Lynwood, Silverado, and Sunnyside aquifers. The Gage/Gardena aquifer occurs at a depth of 180 feet and varies in thickness from 50 to 100 feet. The Lynwood aquifer occurs at a depth of 270 feet. The Silverado aquifer occurs at a depth of 320 to 450 feet and is the principal groundwater source for the region. Beneath the Silverado aquifer, the Sunnyside aquifer occurs at a depth of 600 feet. These aquifers are primarily replenished by area rainfall (City of Carson 2002). According to the preliminary geotechnical report which included drilling borings on site, groundwater was encountered at depths between 23.5 feet and 33.5 feet below ground surface at the Project site (Appendix E). The historic high groundwater in the area was reported at depths of 20 feet below ground surface (Appendix E).

Water Supply

Water supply in the City is served by the California Water Service Company (Cal Water) Dominguez District, which is located in the southern portion of the Los Angeles coastal plain in an area known as the "South Bay." The 35-square-mile Cal Water service area, located approximately 5–10 miles inland from the Los Angeles Harbor, includes the majority of the City of Carson; a large section of the City of Torrance; small sections of the Cities of Compton, Long Beach, and Los Angeles; and a portion of Los Angeles County. According to the Cal Water Dominguez District 2020 Urban Water Management Plan (UWMP), in 2020 Cal Water supplied 14% of its water supply from recycled water, 72% from purchased water, and 13% from groundwater (Cal Water Service 2021). As previously discussed, Cal Water's groundwater supply in this region is pumped from the Central Basin and West Coast Basin, which are adjudicated groundwater basins. As such, Cal Water has an allowable pumping allocation of 6,480 acre-feet per year (AFY) from the Central Basin, and 10,417 AFY from the West Coast Basin, for a total allowable pumping allocation of 16,897 AFY. Currently, Cal Water's infrastructure is unable to fully extract this volume of water from either basin and actual extraction in 2020 was limited to 4,271 acre-feet (Cal Water Service 2021).

Historically, Cal Water Dominguez District has been able to reliably serve customers' water supply needs from year to year. However, interrupted or significantly reduced water supply, such as a during a drought or as a result of an earthquake, could threaten this reliability. In order to maintain this reliability in water supply, Cal Water Dominguez District maintains a water shortage contingency plan, which addresses long-term drought scenarios, as well as catastrophic supply interruptions that could occur suddenly. The primary objective of the water shortage contingency plan is to ensure that Cal Water has in place the necessary resources and management responses needed to protect health and human safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions. This plan involves implementing mandatory water reduction from its customers as well as implementing fines and penalties for those who exceed their allocated water usage (California Water Service 2021).

Regional imported water supplies are conjunctively managed by the Central and West Basin Municipal Water Districts, and the Metropolitan Water District of Southern California. Cal Water coordinates its urban water management planning with each of these entities. During an actual or threatened temporary shortage of imported water to the West Basin Municipal Water District, the Water Replenishment District of Southern California is authorized by the West Coast Basin Judgment to enter into agreements with water purveyors in the basin, which allow the over-extraction of groundwater. This authorized over-extraction can last for 4 months and may be used to produce a maximum of 10,000 acre-feet of water. According to the UWMP, however, Cal Water Dominguez District projects that it will be able to serve 100% of projected demands in normal, single-dry and multiple-dry years (Cal Water Service 2021).

Existing Water Use

The Project site encompasses approximately 27.31 acres with 228 spaces for mobile homes of which approximately 225 were in use at the time of the Notice of Preparation. Other water demands at the site included a common area with a club house, grass field, recreation building, swimming pool, and guest parking area. From 2018 to 2020 water use at the Project site averaged 31.1 AFY (Appendix L-1) which is the rate considered as the baseline for the proposed Project.

Flood Hazards

Historically, flooding problems in the City of Carson have occurred in low lying areas and in areas where slopes are very flat and peak storm flows are unable to be quickly conveyed into the stormwater collection system. According to the City of Carson Standardized Emergency Management System Multi-Hazard Functional Plan, the City is not subject to inundation associated with dam failure. The limits of the 100-year storm are limited to the Dominguez Channel. In the event of a 500-year storm (0.2% annual chance), portions of the City may be flooded. Areas outside the 100-year storm limits may also flood due to deficient stormwater conveyance (City of Carson 2002).

Although the Dominguez Channel, located approximately 400 feet northeast of the Project site, is designated as Zone A, a Special Flood Hazard Area (without base flood elevation), no portion of the Project site is located within a Special Flood Hazard Area (i.e., 100-year flood zone) (Appendix H). The Project site is located in Zone X, Area with Reduced Flood Risk Due to Levee, per FEMA. However, Los Angeles County Flood Control District (LACFCD) had determined in a 2009 study that the Dominguez Channel, while structurally sound, was deficient and cannot adequately convey the 100-year flood (i.e., 1.0% annual chance flood), due to deficiencies in the channel levee (LACDPW 2021). According to preliminary mapping that considers this deficiency, the Project site could be located in the 100-year flood zone for the Dominguez Channel. However, in the 2021 Comprehensive Floodplain Management Plan, updated (December 21, 2018) FEMA maps with official delineation of Special Flood Hazard Areas for Los Angeles County show the Project site as being located in the 500-year flood zone (LACFCD 2021).

4.8.2 Relevant Plans, Policies, and Ordinances

Federal

Clean Water Act

Increasing public awareness and concern for controlling water pollution led to the enactment of the federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act (CWA) (33 USC 1251 et seq.). The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States. The CWA established basic guidelines for regulating discharges of pollutants into the waters of the United States. The CWA requires that states adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA.

Section 303 of the Clean Water Act (Beneficial Use and Water Quality Objectives)

The Los Angeles RWQCB is responsible for the protection of the beneficial uses of waters within the proposed Project area in Los Angeles County. The Los Angeles RWQCB uses its planning, permitting, and enforcement authority to meet its responsibilities adopted in the Basin Plan to implement plans, policies, and provisions for water quality management.

In accordance with state policy for water quality control, the Los Angeles RWQCB employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan for the Los Angeles Region has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. Under CWA Section 303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. A TMDL defines how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. The Los Angeles RWQCB has developed TMDLs for select reaches of water bodies.

Section 402 of the Clean Water Act (National Pollutant Discharge Elimination System)

The CWA was amended in 1972 to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permit program, as authorized by Section 402 of the CWA, was established to control water pollution by regulating point sources that discharge pollutants into waters of the United States (33 USC 1342). In the State of California, the EPA has authorized the State Water Resources Control Board (SWRCB) permitting authority to implement the NPDES program.

Regulations (Phase II Rule) that became final on December 8, 1999, expanded the existing NPDES Program to address stormwater discharges from construction sites that disturb land equal to or greater than 1.0 acre and less than 5.0 acres (small construction activity). The regulations also require that stormwater discharges from small MS4s be regulated by an NPDES General Permit for Stormwater Discharges Associated with Construction Activity, Order No. 99-08-DWQ. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which describes BMPs the discharger would use to protect stormwater runoff. The SWPPP must contain a visual monitoring program, a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs, and a sediment-monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. On September 2, 2009, the SWRCB issued a new NPDES General Permit for Stormwater Associated with Construction Activities (Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002) that became effective July 1, 2010.

National Flood Insurance Program

The National Flood Insurance Act of 1968 established the National Flood Insurance Program in order to provide flood insurance within communities that were willing to adopt floodplain management programs to mitigate future flood losses. The Act also required the identification of all floodplain areas within the United States and the establishment of flood-risk zones within those areas. FEMA is the primary agency responsible for administering programs and coordinating with communities to establish effective floodplain management standards. FEMA is responsible for preparing flood insurance rate maps that delineate the areas of known special flood hazards and their risk applicable to the community. The program encourages the adoption and enforcement by local communities of floodplain management ordinances that reduce flood risks. In support of the program, FEMA identifies flood hazard areas throughout the United States on FEMA flood hazard boundary maps.

Federal Antidegradation Policy

The Federal Antidegradation Policy (40 CFR 131.12) requires states to develop statewide antidegradation policies and identify methods for implementing those policies. Pursuant to the Code of Federal Regulations, state antidegradation policies and implementation methods shall, at a minimum, protect and maintain: (1)

existing in-stream water uses; (2) existing water quality where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource.

State

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—Assembly Bill 1739 (Dickinson), Senate Bill 1168 (Pavley), and Senate Bill 1319 (Pavley)—collectively known as the Sustainable Groundwater Management Act (SGMA), which requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, sustainability should be achieved by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through SGMA, California Department of Water Resources provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably, and requires those GSAs to adopt GPS for crucial (i.e., medium- to high-priority) groundwater basins in California.

California Porter-Cologne Water Quality Control Act

Since 1973, the California SWRCB and its nine RWQCBs have been delegated the responsibility for administering permitted discharge into the waters of California. The Project falls within the Los Angeles RWCQB. The Porter-Cologne Water Quality Act (California Water Code Section 13000 et seq.; CCR, Title 23, Chapter 3, Chapter 15) provides a comprehensive water-quality management system for the protection of California waters. Under the Act, "any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state" must file a report of the discharge with the appropriate RWQCB. Pursuant to the act, the RWQCB may then prescribe "waste discharge requirements" that add conditions related to control of the discharge. Porter-Cologne Water Quality Act defines "waste" broadly, and the term has been applied to a diverse array of materials, including non-point source pollution. When regulating discharges that are included in the federal CWA, the state essentially treats Waste Discharge Requirements and NPDES as a single permitting vehicle. In April 1991, the SWRCB and other state environmental agencies were incorporated into the California Environmental Protection Agency.

The RWQCB regulates urban runoff discharges under the NPDES permit regulations. NPDES permitting requirements cover runoff discharged from point (e.g., industrial outfall discharges) and nonpoint (e.g., stormwater runoff) sources. The RWQCB implements the NPDES program by issuing construction and industrial discharge permits.

Under the NPDES permit regulations, BMPs are required as part of a SWPPP. The EPA defines BMPs as "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of Waters of the United States." BMPs include "treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage" (40 CFR 122.2).

California Antidegradation Policy

The California Antidegradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High-Quality Water in California, was adopted by the SWRCB (State Board Resolution No. 68-16) in 1968. Unlike the Federal Antidegradation Policy, the California Antidegradation Policy applies to all waters of the state (e.g., isolated wetlands and groundwater), not just surface waters. The policy states that whenever the existing quality of a water body is better than the quality established in individual basin plans, such high quality shall be maintained, and discharges to that water body shall not unreasonably affect present or anticipated beneficial use of such water resource.

California Toxics Rule

The EPA has established water quality criteria for certain toxic substances via the California Toxics Rule. The California Toxics Rule established acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water, such as inland surface waters and enclosed bays and estuaries, that are designated by each RWQCB as having beneficial uses protective of aquatic life or human health.

California Water Code

The California Water Code includes 22 kinds of districts or local agencies with specific statutory provisions to manage surface water. Many of these agencies have statutory authority to exercise some forms of groundwater management. For example, a Water Replenishment District (Water Code Section 60000 et seq.) is authorized to establish groundwater replenishment programs and collect fees for that service, whereas a Water Conservation District (Water Code Section 75500 et seq.) can levy groundwater extraction fees. Through special acts of the Legislature, 13 local agencies have been granted greater authority to manage groundwater. Most of these agencies, formed since 1980, have the authority to limit export and control some in-basin extraction upon evidence of overdraft or the threat of an overdraft condition. These agencies can also generally levy fees for groundwater management activities and for water supply replenishment.

Assembly Bill 3030 – Groundwater Management Act

In 1992, Assembly Bill 3030 was passed, which increased the number of local agencies authorized to develop a groundwater management plan and set forth a common framework for management by local agencies throughout California. These agencies could possess the same authority as a water replenishment district to "fix and collect fees and assessments for groundwater management" (Water Code Section 10754), provided they receive a majority of votes in favor of the proposal in a local election (Water Code Section 10754.3).

CALGreen

Formerly known as the California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations, CALGreen is designed to improve public health, safety, and general welfare by utilizing design and construction methods that reduce the negative environmental impact of development and to encourage sustainable construction practices. CALGreen provides mandatory direction to developers of all new construction and renovations of residential and non-residential structures with regard to all aspects of design and construction, including, but not limited to, site drainage design, stormwater management, and water use efficiency. Required measures are accompanied by a set of voluntary standards designed to encourage developers and cities to aim for a higher standard of development.

Local

Municipal National Pollutant Discharge Elimination System Permit

The City is a co-permittee under the "Waste Discharge Requirements for Municipal Stormwater and Urban Runoff Discharges within the County of Los Angeles," issued by the Los Angeles RWQCB (Order No. 96-054), dated July 15, 1996. This order applied to the following:

(1) LACFCD
(2) Unincorporated areas of Los Angeles County under County jurisdiction, with the exception of a portion of Antelope Valley and the City of Avalon
(3) 84 cities within the LACFCD, with the exception of the City of Long Beach

This permit also serves as an NPDES permit under the Federal CWA (NPDES No. CAS614001), as well as waste discharge requirements under California law (the Municipal NPDES Permit), and as a co-permittee under the Municipal NPDES Permit the City is required to adopt ordinances and implement procedures with respect to the entry of non-stormwater discharges into the MS4s.

Part 1, Section I of the Municipal NPDES Permit requires the City to effectively prohibit non-stormwater discharges from within its boundaries, into that portion of the MS4 that it owns or operates. Part 2, Section 1.E of the Municipal NPDES Permit requires the City to demonstrate that it possesses the legal authority necessary to control discharges to and from those portions of the MS4 over which it has jurisdiction, so as to comply with the Municipal NPDES Permit and to specifically prohibit certain discharges identified in the Municipal NPDES Permit.

The Municipal NPDES Permit contemplates the development of a Countywide Storm Water Management Plan and then a Watershed Management Area Plan, in which the City will participate. In turn, the City requires the development and the implementation of programs for, among other things, the elimination of illicit connections and illicit discharges, development planning, development construction, and public information and education requirements, which may require the later adoption of additional legal authority to implement such programs, as those programs are developed by the Permittees and approved by the Regional Board.

Los Angeles County Low Impact Development Manual

The County of Los Angeles prepared the 2014 Low Impact Development Standards Manual (LID Standards Manual) to comply with the requirements of the NPDES MS4 Permit for stormwater and non-stormwater discharges from the MS4, within the coastal watersheds of Los Angeles County (CAS004001, Order No. R4-2012-0175), also known as the Los Angeles Water Quality Ordinance. This permit covers 84 cities and the unincorporated areas of Los Angeles County. Under the permit, the LACFCD is designated as the principal permittee, and the county, along with 84 incorporated cities, is designated as a permittee. In compliance with the permit, the permittees have implemented a stormwater quality management program, with the ultimate goal of accomplishing the requirements of the permit and reducing the amount of pollutants in stormwater and urban runoff, wherein new development/redevelopment projects are required to prepare a LID report.

The Los Angeles County LID Standards Manual provides guidance for the implementation of stormwater quality control measures in new development and redevelopment projects in unincorporated areas of the county, with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges. The LID Standards Manual addresses the following objectives and goals (LACPW 2014):

- Lessen the adverse impacts of stormwater runoff from development and urban runoff on natural drainage systems, receiving waters, and other water bodies.
- Minimize pollutant loadings from impervious surfaces by requiring development projects to incorporate properly designed, technically appropriate BMPs and other LID strategies.
- Minimize erosion and other hydrologic impacts on natural drainage systems by requiring development projects to incorporate properly designed, technically appropriate hydromodification control development and technologies.

City of Carson General Plan

In December 2006, the City revised its 2004 General Plan. The following is a list of goals and policies applicable to the proposed Project relating to Hydrology and Water Quality from the Open Space and Conservation Element, the Land Use Element, Transportation and Infrastructure Element, and Safety Element:

Open Space and Conservation Element

Goal:

***OSC-2*:** Protection and conservation of Carson's water resources

***OSC-2.1**:* Maintain and improve water quality.

OSC-2.2: Continue to monitor land uses discharging into water sources and water recharge areas, to prevent potential contamination from hazardous or toxic substances.

OSC-2.3: Minimize soil erosion and siltation from construction activities through monitoring and regulation.

***OSC-2.4**:* Conserve the water supply available to the City and promote water conservation in the management of public properties.

***OSC-2.5**:* Educate citizens about water conservation, encourage its practice and monitor its effectiveness.

***OSC-2.6**:* Ensure the completion of the reclaimed water facility in the City of Carson.

***OSC-2.7**:* Encourage the use of reclaimed water in all applications for which potable water is not necessary.

Land Use Element

Goal:

LU-15: Promote development in Carson which reflects the "Livable Communities" concepts

LU-15.7 Provide for the efficient use of water through the use of natural drainage, drought-tolerant landscaping, and use of reclaimed water, efficient appliances and water-conserving plumbing fixtures.

Transportation and Infrastructure

Goal:

TI-8: Provide sustainable water and wastewater systems that meet the needs of the community.

TI-8.2*:* As development intensifies and/or as land redevelopment occurs in the City, ensure that infrastructure systems are adequate to accommodate any intensification of uses, as well as existing uses.

Safety Element

Goal:

SAF-2: Strive to minimize injury and loss of life, damage to public and private property and infrastructure, and economic and social disruption caused by flood hazards.

SAF-2.1: Continue to maintain and improve levels of storm drainage service.

SAF-2.2*:* Continue to work with the appropriate local, State and Federal agencies (i.e., LACDPW, Caltrans, FEMA, etc.) to reduce the potential for flood damage in the City of Carson.

SAF-2.3: Ensure that areas experiencing localized flooding problems are targeted for storm drain improvements. To this end, work closely with the LACDPW and other cities in the South Bay region to ensure that facilities are adequate to accommodate waters.

SAF-2.4*:* As development intensifies and/or as redevelopment occurs in the City, ensure that storm drain systems are adequate to accommodate any intensification of uses, as well as existing uses.

SAF-2.5*:* Periodically review and recommend appropriate changes to the LACDPW for the Storm Drainage Master Plan for Los Angeles County.

SAF-3*:* Minimize the effects of natural and urban disasters to reduce, to the extent possible, the social and economic impacts that these may have on the community.

SAF-3.2*:* Maintain and update, as necessary, the Standardized Emergency Management System Multihazard Functional Plan, which identifies emergency response and recovery actions in the event of an incident.

4.8.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to hydrology and water quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hydrology and water quality would occur if a Project would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

3. 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:
   a. result in substantial erosion or siltation on or off-site;
   b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site;
   c. 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
   d. impede or redirect flood flows.
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
6. Result in cumulatively considerable hydrological or water quality impacts.

4.8.4 Impacts Analysis

Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Construction

Less-than-Significant Impact. The Project is located in a heavily urbanized area of the City and is presently fully developed. Project implementation would involve demolition and earthwork activities that would disturb site soils such that they could become exposed to the effects of wind and water erosion and transport sediments to receiving waters if not managed appropriately.

The analysis of potential impacts of construction activities, construction materials, and non-stormwater runoff on water quality during the demolition and construction phase focuses primarily on sediment and certain non-sediment-related pollutants. Construction-related activities that primarily result in sediment releases are related to exposing previously stabilized soils to potential mobilization by rainfall/runoff and wind that can adversely affect receiving waters. Additionally, other pollutants, such as nutrients, trace metals, and hydrocarbons, can attach to sediment and be transported downstream, including the Dominguez Channel, which could contribute to the degradation of water quality. Furthermore, during grading and temporary stockpiling of soil, there is the potential for soil migration off-site via wind (refer to Section 4.2, Air Quality, for further discussion of construction generated air quality impacts).

Non-sediment-related pollutants that are also of concern during construction include hazardous construction materials (e.g., fuels, lubricants, paint, and solvents); chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment; and concrete-related pollutants.

The proposed Project would comply with the provisions of the NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002), also known as the Construction General Permit. Because the Project site is greater than 1 acre in size, the Project Applicant would be required to submit a Notice of Intent to the Los Angeles RWQCB in order to obtain approval to complete construction activities under the Construction General Permit. This permit would include a number of design, management, and monitoring requirements for the protection of water quality

and the reduction of construction phase impacts related to stormwater (and some non-stormwater) discharges. Permit requirements would include the preparation of a SWPPP, implementation and monitoring of BMPs, implementation of best available technology for toxic and non-conventional pollutants, implementation of best conventional technology for conventional pollutants, and periodic submittal of performance summaries and reports to the Los Angeles RWQCB. The SWPPP would apply to the Project as a whole and would include reference to the major construction areas, materials staging areas, and haul roads. Typical BMPs that could be incorporated into the SWPPP to protect water quality include the following:

- Diverting off-site runoff away from the construction site
- Vegetating landscaped/vegetated swale areas as soon as feasible following grading activities
- Placing perimeter straw wattles to prevent off-site transport of sediment
- Using drop inlet protection (filters and sandbags or straw wattles), with sandbag check dams within paved areas
- Regular watering of exposed soils to control dust during demolition and construction
- Implementing specifications for demolition/construction waste handling and disposal
- Using contained equipment wash-out and vehicle maintenance areas
- Maintaining erosion and sedimentation control measures throughout the construction period
- Stabilizing construction entrances to avoid trucks from imprinting soil and debris onto adjoining roadways
- Training, including for subcontractors, on general site housekeeping

Incorporation of required BMPs for materials and waste storage and handling, and equipment and vehicle maintenance and fueling would reduce the potential discharge of polluted runoff from construction sites, consistent with the state NPDES General Construction Permit and CALGreen requirements. Compliance with existing regulations would prevent violation of water quality standards and minimize the potential for contributing sources of polluted runoff. Therefore, impacts to water quality from demolition and construction activities associated with the proposed Project would be **less than significant**.

Operations

Less-than-Significant Impact. The Project would involve the construction and operation of a mixed-use community. Land uses that could contribute pollutants to stormwater runoff in the long term include uncovered parking areas (through small fuel and/or fluid leaks), uncovered refuse storage/management areas, landscape/open space areas (if pesticides/herbicides and fertilizers are improperly applied), and general litter/debris (e.g., generated during facility loading/unloading activities).

During storm events, the first few hours of moderate to heavy rainfall could wash a majority of pollutants from the paved areas where, without proper stormwater controls, those pollutants could enter the Torrance Lateral Drainage Channel and Dominguez Channel. The majority of pollutants that could enter these waters would be dust, litter, and possibly residual petroleum products (e.g., motor oil, gasoline, diesel fuel). Certain metals, along with nutrients and pesticides from landscape areas, can also be present in stormwater runoff. Between periods of rainfall, surface pollutants tend to accumulate, and runoff from the first significant storm of the year ("first flush") would likely have the largest concentration of pollutants.

As a permittee subject to the MS4 NPDES permit, the City is responsible for ensuring that all new development and redevelopment projects comply with the performance criteria contained in the MS4 NPDES Permit. The MS4 NPDES Permit sets limits on pollutants being discharged into waterways and requires all new development and significant

redevelopment to incorporate LID features that are laid out in the 2014 Los Angeles County LID Manual. Incorporation of LID features into development projects is one of the main components of the Los Angeles County Municipal MS4 NPDES Permit. In accordance with the MS4 NPDES Permit, a project applicant must submit a comprehensive LID Plan and analysis demonstrating compliance with the LID Standards Manual (LACPW 2014), for review and approval by the Director of Public Works.

Project Low Impact Development Features

The proposed Project would be designed and constructed in accordance with the Municipal MS4 NPDES Permit and 2014 LID Standards Manual. The manual mandates completion of a LID Plan, as was completed for the proposed Project. The LID concept for the proposed Project is likely a stormwater capture and use system (Appendix H). Soils engineering recommendations suggest that ground infiltration is not possible at the site, however the installation of a stormwater harvesting tank can meet LID requirements. Rainwater harvesting collects rainwater from a surface that allows for the rainwater to be stored and used later. In a typical rainwater harvesting situation, rainwater is collected from an impervious surface such as the roof of a building and then stored inside of a tank or cistern. Rainwater can be collected from other surfaces as well such as parking lots, roadways, driveways, and even land surfaces. The runoff within the cistern will be pumped up for irrigation of the landscape around the Project Site. High flow outlets for the rainwater harvesting cistern will be routed to discharge into the County's storm drain system as per proposed conditions.

The primary pollutants of concern for the Project site (i.e., sediment, trash, and bacteria and viruses) would be addressed through pre-treatment settlement devices connected to harvesting tanks within the Project site. Pretreatment settling devices rely primarily on sedimentation, in which coarse sediments and debris sink or fall out of the collected stormwater. Some settling devices also provide secondary screening to improve the capture of floatables and sediment. Building roof run-off would be collected via roof drains and routed internally through the buildings and directed into the harvesting tank. Capture and use, commonly referred to as rainwater harvesting, collects and stores stormwater for later use, thereby offsetting potable water demand and reducing pollutant loading to the storm drain system.

Implementation of these LID features and BMPs would, to the maximum extent practicable, reduce the discharge of pollutants from the Project site into the Torrance Drainage Channel, including inadvertent release of pollutants, improper management of hazardous materials, and trash and debris. In accordance with CALGreen requirements, Project source control BMPs to improve water quality would be provided for outdoor material storage areas, outdoor trash storage/waste handling areas, outdoor loading/unloading areas, and building materials areas.

Conclusion

Water quality enhancement proponents of the Project, including implementation of a SWPPP, stormwater BMPs, and LID design, would minimize potential off-site surface water quality impacts and contribute to a reduction in water quality impacts within the overall Dominguez Channel Watershed. Construction of the proposed improvements associated with the Project could incrementally provide improvements to water quality over existing conditions, which would benefit downstream receiving waters. As a result, impacts would be **less than significant**.

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?

Less-than-Significant Impact. As previously discussed, construction activities for the Project involve the redevelopment of the Project site that would also include expansion of pervious surfaces with the addition of open space park areas. There are no proposed underground levels for this Project and no direct pumping of underlying groundwater supplies. According to the preliminary geotechnical report, groundwater at the Project site occurs at depths between 23.5 feet and 33.5 feet below ground surface (Appendix E). The historic high groundwater in the area was reported at depths of 20 feet. Although the proposed excavation would not likely be below the current groundwater level, it is still possible because of fluctuating groundwater levels, that groundwater is encountered during construction activities. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with all applicable regulations and requirements, including all relevant NPDES requirements related to construction and discharges from dewatering operations. NPDES requires dischargers must demonstrate that discharges do not violate any water quality objective/criteria for the receiving waters, demonstrate that discharge shall not exceed effluent limitations, perform an analysis using a sample of groundwater or wastewater to be discharged, show discharge shall not cause acute nor chronic toxicity in receiving waters, that discharge shall pass through a treatment system if necessary, and must comply with the provisions of the NPDES permit. Otherwise, any dewatering that may be required for construction would be temporary and would have negligible effects on underlying groundwater supplies. Therefore, through compliance with regulatory requirements, potential impacts would be less than significant.

Regarding groundwater recharge, the Project Site is currently mostly impervious with approximately 99% impervious surfaces. Therefore, there is currently a very low potential for groundwater recharge occurring under existing conditions. The proposed Project would decrease the amount of impervious surface, allowing for an increased potential for on-site recharge. As such, the Project would not interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the West Coast Groundwater Basin.

Groundwater Management

The proposed Project would receive its water supply from Cal Water Dominguez District. As required by the California Urban Water Management Planning Act, Cal Water Dominguez District has prepared a 2020 UWMP for its service area that includes the Project site. In 2020, Cal Water Dominguez District met 13% of its demand from groundwater that was sourced from both the West Coast and Central Basins. Based on the UWMP, Cal Water plans to continue to use groundwater as a source for approximately 10%–20% of its total water supply.

As previously discussed, in accordance with SGMA, the Department of Water Resources has determined that both of these basins have a very low priority regarding prioritizing the completion of a GSP in large part because both basins are adjudicated. Cal Water has an allowable pumping allocation of 6,480 AFY from the Central Basin and 10,417 AFY from the West Coast Basin, for a total allocation of 16,897 AFY. However, currently, Cal Water's infrastructure is unable to fully extract its allowable pumping allocation but is projected to use no more than 5,885 AFY through to 2045.

The Cal Water Dominguez District 2020 UWMP also includes an analysis of water supply reliability projected through 2045. Based on the analysis, Cal Water would be capable of providing adequate water supply to its service area under a normal supply and demand scenario, a single dry-year supply and demand scenario, and multiple dry-year supply and demand scenarios, through 2045. Thus, the Cal Water Dominguez District UWMP accounts for increased demand as growth within the City occurs (Cal Water Service 2021).

According to the Project-specific Water Supply Assessment (WSA), the Project is estimated to have a total water demand of 182 AFY. Based on the existing water demand for the Project site of 31 AFY, the potable water demand for the Project site minus the existing demand is estimated at 151 AFY. This estimate is based on average rates for the different land uses of the proposed Project, as detailed in the WSA (Table 1, Appendix L-1). It was noted in the WSA that irrigation return flows to groundwater and flows to the area's recycled water system were not factored into the Project demand calculations making the actual demand on the supply system conservative at 151 AFY.

As previously discussed, Cal Water Dominguez generally plans to source 10%–20% of its water supply from groundwater. Groundwater pumping volumes within the Dominguez District in recent years (not including desalinated brackish groundwater) have averaged 4,892 AFY from 2015 through 2020, which is lower than the average of 8,332 AFY from 2000 through 2014 (Appendix L-1), reflecting Cal Water's successful implementation of water conservation measures in response to the drought and continued efficiency due to passive conservation and demand hardening. The Project's demand of 151 AFY would also only represent a marginal increase ranging from approximately 0.09% to 0.18% of Cal Water's allowable pumping allocation of 16,897 AFY from both the adjudicated Central and West Coast Basins.

The 2020 Cal Water Dominguez District UWMP has planned for growth within the Dominguez service area over the next 25 years. Cal Water has made an allowance for future demand estimates based on historical growth rates in the service area. Based on these projections, it would appear that Cal Water has adequately made allowance for water supply–demand increases for both domestic and commercial water supply, including groundwater, over the next 25 years. According to Table 4.2.3, Total Gross Water Use (Potable and Non-Potable), of the Cal Water Dominguez 2020 UWMP, Cal Water projects an increase in water demand of 4118 AFY between 2020 (32,968 AFY) and 2045 (33,086 AFY) (California Water Service 2021). According to the WSA, all supply sources available to the Dominguez District are considered highly reliable based on the findings of the 2020 UWMP. And while the proposed Project is not specifically identified in the UWMP, the plan does account for growth and increases in demand including those associated with the proposed Project. Further, the Dominguez District is currently projecting groundwater pumping significantly below the combined total of the Dominguez District's available rights (10,417.45 AFY of adjudicated rights in the West Coast Subbasin and 6,480 AFY in the Central Subbasin). Given the above, sufficient water supply is estimated to be available to Cal Water to meet future demands within the Dominguez District service area from 2020 through 2045 under all hydrologic conditions (i.e., current and projected, and for normal, single dry, and multiple dry years including a five-year drought period) (Appendix L-1).

Therefore, with implementation of regional groundwater management plans and the adjudication of the basins, the Project would not substantially decrease groundwater supplies or impede sustainable ground management of the relevant groundwater basins, as previously described. As a result, impacts would be **less than significant**.

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:

a. result in substantial erosion or siltation on or off site;

Construction

Less-than-Significant Impact. Construction activities would include earthwork activities which have the potential to temporarily alter existing drainage patterns and flows on the Project site by exposing the underlying soils, modifying flow direction, and making the Project site temporarily more permeable. Also,

exposed and stockpiled soils could be subject to erosion and conveyance into nearby storm drains during storm events. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. However, as discussed above, Project construction activities would occur in accordance with City grading permit regulations (Chapter 8 of the Carson Municipal Code), including the preparation of an erosion control plan, as well as implementation of NPDES General Construction Permit requirements, such that construction activities for the Project would not substantially alter the Project site drainage patterns in a manner that would result in substantial erosion or siltation on- or off-site. As such, construction-related impacts to hydrology would be **less than significant**, and no mitigation measures are required.

Operation

Less-than-Significant Impact. The Project Site consists nearly entirely of impervious surfaces under existing conditions. With implementation of the Project, the amount of impervious area would decrease with the addition of open space park areas and limited landscaping. However, there would be a limited potential for erosion or siltation to occur from these newly created pervious surfaces as they would be vegetated which reduces the potential for erosion or siltation. In addition, as Table 4.8-2 demonstrates, a decrease in total peak storm runoff flows is expected due to the proposed development, ranging from a decrease of 6% to 15% in the different storm flow event scenarios. This reduction in peak storm flows would also reduce the potential for the proposed changes in drainage patterns to result in erosion or siltation. Therefore, the Project would not substantially alter the existing drainage pattern of the Project Site or surrounding area such that substantial erosion or siltation on-site or off-site would occur and the potential impact is **less than significant**.

Table 4.8-2. Existing and Proposed Hydrology Results

Storm Event	Existing (Q total cfs)	Proposed (Q total cfs)	Percent Reduction
5-Year	26.99	22.95	-15.0
10-Year	35.65	31.61	-11.3
25-Year	46.54	42.50	-8.7
50-Year	54.78	50.74	-7.4
100-Year	63.68	59.64	-6.3

Notes: Q = Total Flow; cfs = cubic feet per second.

b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;

Less-than-Significant Impact. As previously described for threshold (a), the proposed drainage system would decrease the total stormwater flows during peak storm events by 6% to 15% compared to existing conditions. As a result, flooding on- or off-site would not occur and the potential impacts would be **less than significant**.

c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Less-than-Significant Impact. As previously discussed in significance threshold (a), the proposed drainage system would decrease the rate or amount of surface runoff associated with a peak storm events. In addition, the Project would incorporate LID features including the installation of building roof drain downspouts, area drain, and planter drains to collect roof and site runoff. The Project would also direct

stormwater away from buildings through a series of storm drainpipes. In addition, the implementation of BMPs required by the County's LID Ordinance would target runoff pollutants that could potentially be carried in stormwater runoff due to the collection of water to meet the regional LID guidelines. Therefore, the Project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be **less than significant**, and no mitigation measures are required.

d. impede or redirect flood flows?

Less-than-Significant Impact. The Project site is located in Zone X, Area with Reduced Flood Risk Due to Levee, per the FEMA flood insurance rate map, panel 06037C1935F, effective date September 26, 2008. This FEMA flood hazard designation is not current with respect to the proposed Project due to a determination that the channel cannot contain the 100-year flood. According to updated preliminary (December 21, 2018) FEMA maps with official delineation of Special Flood Hazard Areas for Los Angeles County, show the Project site as being located in the 500-year flood zone (LACFCD 2021). While this map has not received final approval by FEMA, it represents the most current data regarding flood risks for the Project site.

As previously noted, the Project site is currently developed and redevelopment with the proposed Project would result in a drainage pattern that would continue to discharge to the Dominguez Channel. As also mentioned, peak storm flows from the site would be reduced compared with existing conditions and, as a result, would not substantially alter the existing drainage pattern of the site in a manner that would impede or redirect flood flows. Regardless of whether the proposed Project elevations in the vicinity of proposed structures would be within Zone X (i.e., 0.2% annual chance of flooding) or potentially Zone A, a Special Flood Hazard Area (i.e., 1.0% annual chance of flooding), the site would continue to be developed with above ground improvements and would not impede or redirect flood flows such that there would be any adverse downstream flooding-related impacts. Therefore, flood related impacts would be **less than significant**, and no mitigation is required.

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

Less-than-Significant Impact. As previously described, the proposed Project would decrease the runoff volumes during peak storm events compared with existing conditions and would be required to meet drainage control requirements for volume capacity and water quality. Currently, the Project site is located in FEMA Zone X, with preliminary maps showing it to be in the 500-year flood zone but could potentially in the future be located within Zone A, a Special Flood Hazard Area. However, the Los Angeles County Flood Control District has begun analysis to develop improvement alternatives to address flood capacity. In the event that a flood did occur and inundate the Project site, the proposed Project would not be industrial in nature nor include the storage of substantive quantities of hazardous materials or pollutants, thus minimizing the potential for release of pollutants due to possible Project inundation. As described in Section 4.7, Hazards and Hazardous Materials, any small quantities of hazardous chemicals would be used in compliance with existing regulations and guidelines. The use, storage, and transport of hazardous materials and hazardous wastes would be subject to all applicable federal, state, and local health and safety laws and regulations that are intended to minimize the health risks to the public and the environment associated with hazardous materials. Otherwise, the Project site is not located within a coastal area or in the vicinity of an enclosed or semi-enclosed body of water such that the potential for tsunami or seiche waves is negligible. As a result, risk of release of pollutants due to flood-related hazards would be **less than significant**, and no mitigation is required.

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

Less-than-Significant Impact. The proposed Project would comply with applicable water quality regulatory requirements, including implementation of a SWPPP, stormwater BMPs, NPDES MS4 stormwater design requirements, and LID design measures, which are consistent with Los Angeles RWQCB Basin Plan water quality objectives and policies and would contribute to a reduction in water quality impacts within the overall Dominguez Channel Watershed. In addition, with compliance with these regulatory requirements, the Project would reduce potential water quality impairment of surface waters such that existing and potential beneficial uses of key surface water drainages throughout the jurisdiction of the Los Angeles RWQCB Basin Plan would not be adversely impacted. As a result, the Project would not conflict with or obstruct the Los Angeles RWQCB Basin Plan.

With respect to groundwater management, SGMA empowers local agencies to form GSAs to manage basins sustainably and requires those GSAs to adopt GSPs for crucial groundwater basins in California. A GSA has not been established for the West Coast Basin or Central Basin, as they are considered to be low-priority basins due to their adjudication and existing management measures. Further, the Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. As a result, the Project would not conflict with or obstruct sustainable management of the basins where water supply would be sourced from. Impacts are considered **less than significant**, and no mitigation measures are required.

Would the Project have cumulatively considerable impacts with regards to hydrology or water quality?

Water Quality

Less-than-Significant Impact. The geographic context for the analysis of cumulative impacts associated with water quality is the Dominguez Channel Watershed, which is already largely urbanized and largely covered with impervious surfaces. The analysis accounts for all anticipated cumulative growth within this geographic area, which includes the list of related projects within the Cities of Carson, Torrance, and Gardena. Cumulative development in these cities could add new sources of stormwater runoff. Construction activities associated with development could temporarily increase the amount of exposed surfaces that could contribute to sediments in stormwater runoff. Additionally, materials associated with construction activities could be deposited on surfaces and carried to receiving waters in stormwater runoff.

Continued development and redevelopment within the area could also increase the amount of impervious surfaces that could increase stormwater runoff rates and amounts, as well as changes in land use that may increase the amount of pollutants in stormwater runoff. However, all cumulative development would be subject to existing regulatory requirements to protect water quality and minimize increases in stormwater runoff. For example, Part 1, Section I of the Municipal NPDES MS4 Permit requires the City to effectively prohibit non-stormwater discharges from within its boundaries. Part 2, Section 1.E, of the Municipal NPDES MS4 Permit requires the City to demonstrate that it possesses the legal authority necessary to control discharges to and from those portions of the MS4 over which it has jurisdiction, to comply with the Municipal NPDES MS4 Permit and to specifically prohibit certain discharges identified in the Municipal NPDES Permit. The Cities of Gardena and Torrance maintain similar permit requirements to reduce pollutants in stormwater runoff.

Every 2 years, the Los Angeles RWQCB must reevaluate water quality within its geographic region and identify those water bodies not meeting water quality standards. For those impaired water bodies, a TMDL must be prepared and implemented to reduce pollutant loads to levels that would not contribute to a violation of water quality standards.

All development within the Dominguez Channel Watershed would be subject to the water quality standards outlined in the Basin Plan and would comply with any established TMDLs. The continuing review process would ensure that cumulative development within the watershed would not substantially degrade water quality.

In addition, cumulative projects would comply with existing and future regulations to protect water quality, including the NPDES Construction General Permit. Compliance with existing regulations would prevent violation of water quality standards and minimize the potential for contributing additional sources of polluted runoff. Therefore, Project impacts associated with water quality standards and polluted runoff would be less than significant, and the proposed Project would not contribute considerably to cumulative impacts. As a result, cumulative water quality impacts would be **less than significant**, and no mitigation is required.

Drainage

Less-than-Significant Impact. The geographic context for the analysis of cumulative impacts related to storm drainage is the Dominguez Channel Watershed, which is already largely urbanized with impervious surfaces. Cumulative projects could potentially increase the amount of impervious surfaces that could cause or contribute to storm drain system capacity exceedance, alter the existing storm drain system, and/or require the construction of new or expanded facilities. New development within the watershed would be subject to the environmental review process that would analyze potential impacts associated with stormwater runoff to the storm drain system and would comply with current state and local environmental regulations, such as the NPDES Construction General Permit, California Fish and Game Section 1602, the CWA Section 404 permit process, and others.

Additionally, the LACFCD controls and monitors flows within its system. The proposed Project would be required to obtain a permit from the County of Los Angeles to ensure that allowable capacity flow to the Dominguez Channel is not exceeded. However, current analysis has already shown, as described above, that the proposed Project would result in an overall reduction in peak storm flows from the site compared with existing conditions. Therefore, the proposed Project could not contribute to capacity issues within Dominguez Channel and potential impacts to drainage flows associated with the proposed Project would not contribute considerably to cumulative impacts. Therefore, cumulative drainage-related impacts would be **less than significant**, and no additional mitigation is required.

4.8.5 Mitigation Measures

No mitigation is required, as all impacts would be **less than significant**.

4.8.6 Level of Significance After Mitigation

Impacts would be **less than significant**.

4.8.7 References

Cal Water Services (California Water Services). 2021. *2020 Urban Water Management Plan*. June 2021.

CDWR (California Department of Water Resources). 2020. *Sustainable Groundwater Management Act 2019 Basin Prioritization, Process and Results*. May 2020.

City of Carson. 2002. *City of Carson Public Review Draft General Plan Environmental Impact Report (Volume II)*. October 30, 2002.

City of Los Angeles. 2015. *Enhanced Watershed Management Program for the Dominguez Channel Watershed Management Area Group Final.* June 2015.

LA Sanitation. 2021. "Dominguez Channel." City of Los Angeles, LA Sanitation. Accessed on August 23, 2021. https://lacitysan.org/san/faces/wcnav_externalId/s-lsh-wwd-wp-ewmp-dc;jsessionid=Gpf8zfHCFj1BfgmlVTyzLH00PEaxdfH7glO-p0izlWNd-DGcpaRV!1698443149!457293000?_adf.ctrl-state=1246zia2nj_1&_afrLoop=8684415984893212&_afrWindowMode=0&_afrWindowId=null#!%40%40%3F_afrWindowId%3Dnull%26_afrLoop%3D8684415984893212%26_afrWindowMode%3D0%26_adf.ctrl-state%3D1246zia2nj_5.

LACFCD (Los Angeles County Flood Control District) . 2021. "Dominguez Channel Levee Certification: Preliminary Special Flood Hazard Area" [map]. Thomas Bros. Maps. Accessed August 25, 2021. http://dpw.lacounty.gov/wmd/PreFloodCommunity_DomChnl_2x3.pdf.

LACPW (Los Angeles County Public Works). 2014. *Low Impact Development, Standards Manual*. February 2014.

LACPW. 2021. "Levee Certification Program." Accessed August 24, 2021. https://www.dpw.lacounty.gov/wmd/NFIP/dsp_LeveeCertificationFAQs.aspx.

LARWQCB (Los Angeles Regional Water Quality Control Board). 2014. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*. Online editions: https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html.

SWRCB (State Water Resource Control Board). 2017. *Final California 2014 and 2016 Integrated Report (303(d) List/305(b) Report) Supporting Information.* Accessed on September 9, 2021. https://www.waterboards.ca.gov/water_issues/programs/tmdl/2014_16state_ir_reports/table_of_contents.shtml.

4.9 Land Use and Planning

This section describes the existing land use and planning conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project).

Information contained in this section is based on review of local, regional, and statewide policies and regulations encompassing the Project area. Other sources consulted are listed in Section 4.9.7, References.

4.9.1 Existing Conditions

This section describes the existing land uses, surrounding land uses, and existing land use and zoning for the Project site.

Existing Land Uses

Imperial Avalon Mobile Estates

The Project site is currently developed with the Imperial Avalon Mobile Estates mobile home park (Mobile Home Park), as depicted in Figure 3-2, Existing and Surrounding Land Uses, in Chapter 3, Project Description. The Mobile Home Park opened in 1975 and contains 225 mobile home coaches, a recreational vehicle storage yard with over 20 spaces, and a common area including a clubhouse, grass field, recreation building, swimming pool, and guest parking spaces. As described in further detail in Chapter 3, Project Description, the Mobile Home Park owner has proceeded with closing the Mobile Home Park.

Surrounding Land Uses

The Project site is located in a largely developed part of Carson, characterized by a mix of residential and commercial uses (see Figure 3-2, Existing and Surrounding Land Uses, in Chapter 3). The Project site is located to the west of South Avalon Boulevard between Interstate (I) 405 to the north and East 213th Street to the south. The following land uses surround the Project site:

- North: Immediately north of the Project site is the concrete-lined Torrance Lateral Drainage Canal. The area north of the canal is the approximately 157-acre former Cal-Compact landfill site. The site has been the subject of numerous development proposals dating back to the early 2000s. As recently as 2018, the Carson City Council approved a project known as the 2018 District at South Bay Specific Plan Amendment and certified its associated Subsequent Environmental Impact Report (EIR) (City of Carson 2021a). The project contemplated residential, regional commercial, and restaurant uses, and plans are in place to develop the northern 61 acres of the site with these uses. However, the City of Carson (City) has received a development application to change the land use for the southern 96 acres of the site to a mix of approximately 84 acres of light industrial/logistics uses and approximately 12 acres of community serving commercial/retail uses with publicly accessible passive and active open space areas. This latest development proposal is titled The District at South Bay 2021 and would involve an amendment to the 2018 Subsequent EIR, known as the 2021 District at South Bay Specific Plan Amendment (City of Carson 2021b). On May 23, 2022, the City Council approved a number of land use entitlements to authorize the District at South Bay 2021 project including but not limited to, a General Plan Amendment, Specific Plan Amendment and Development Agreement.

- East: The land uses to the east of South Avalon Boulevard includes an auto dealership site, with the I-405 farther east.
- South: The parcel located adjacent to the southern boundary of the Project site is occupied by an auto dealership and single- and multifamily residential uses.
- West: The land uses to the west of Grace Avenue are single-family residential uses.

Existing Land Use and Zoning

As shown in Figure 3-3, Existing and Proposed Land Use Designations, in in Chapter 3, the City's General Plan Land Use map designates the Project site Regional Commercial (east) and Low Density Residential (west) (City of Carson 2015). Per the City's General Plan, Regional Commercial includes uses intended to serve a broad population base and offer a wide range of services to both the community and the region. Businesses in this designation include major department stores, specialty shops, other retail and service uses, automobile and other vehicle dealerships, and hotels and motels. Regional Commercial is intended to provide for the City's primary regional shopping center and its peripheral areas. Low Density Residential includes all residential areas composed of single-family detached dwellings and other development considered harmonious with such low-density residential development. The maximum density allowed is 8 dwelling units per acre (du/ac) (City of Carson 2004).

As shown in Figure 3-4, Existing and Proposed Zoning, in in Chapter 3, the corresponding zoning for the Project site is Commercial, Automotive (east), and RM-8-D zone (west) (City of Carson 2017). Per the City's Zoning Code, "D" identifies a Design Overlay designation, created "primarily to provide for Site Plan and Design Review of future development within the designated areas in order to achieve special standards of design, architectural quality, style and compatibility, landscape treatment, and functional integration of neighboring developments."

4.9.2 Relevant Plans, Policies, and Ordinances

State

California Government Code Section 65300

California Government Code Section 65300 et seq. mandates that every city and county must prepare, adopt, and implement a general plan to guide and shape its physical as well as social and economic development, environmental resources, and to address various growth-related statutes of the State over a long-term (typically 20-year) timeframe. This law discusses the substantive and procedural requirements of general plans and places general plans atop the hierarchy of the tools of local government that regulate land use. This law also provides for changes in community development by allowing amendments to be made to a General Plan.

California Government Code Section 65450

Pursuant to Government Code Section 65450, a Specific Plan must include text and a diagram or diagrams, which specify all of the following in detail:

- The distribution, location, and extent of the uses of land, including open space within the area covered by the plan.
- The proposed distribution, location, extent, and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy and other essential facilities

proposed to be located within the land area covered by the plan and needed to support the land uses described in the plan.

- Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.
- A program of implementation measures including regulations, programs, public works projects and financing measures necessary to carry out the above items.
- A discussion of the relationship of the Specific Plan to the General Plan.

Senate Bill 375

The adoption of California's Sustainable Communities and Climate Protection Act Senate Bill (SB) 375 (Steinberg, Chapter 728, Statutes of 2008) on September 30, 2008, aligns with the goals of regional transportation planning efforts, regional greenhouse gas (GHG) reduction targets, and land use and housing allocations. SB 375 requires Metropolitan Planning Organizations such as the Southern California Association of Governments (SCAG) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy within their Regional Transportation Plan (RTP) to demonstrate achievement of GHG reduction targets. In compliance with SB 375, SCAG has adopted an SCS that covers all of the City of Carson, as well as other cities and counties.

Regional

Regional Transportation Plan/Sustainable Communities Strategy

SCAG is the designated Metropolitan Planning Organization for six Southern California counties (Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial), and is federally mandated to develop plans for transportation, growth management, hazardous waste management, and air quality. The City of Carson is one of the many jurisdictions that fall under SCAG.

The 2020–2045 RTP/SCS (also known as the Connect SoCal Plan) was approved September 3, 2020 and presents the land use and transportation vision for the region through the year 2045. The RTP/SCS explicitly lays out goals related to housing, transportation technologies, equity and resilience in order to adequately reflect the increasing importance of these topics in the region, and where possible the goals have been developed to link to potential performance measures and targets. The RTP/SCS encompasses various guiding principles to improve the region's future, including mobility, economy, and sustainability. Federal policy also requires that SCAG sets performance measures and targets in Connect SoCal. Under the RTP/SCS, SCAG coordinated closely with the State of California Department of Transportation in the establishment of specific performance targets for the state and for our region in the various transportation performance areas established under the 'Moving Ahead for Progress in the 21st Century' (MAP-21)/Federal Transportation Authorization Package Act. These targets provide quantifiable objectives to achieve each measure during the performance period (SCAG 2020).

The RTP/SCS development process also involved working closely with local governments throughout the region to collect and compile data on land use and growth trends. The core vision of the RTP/SCS is to build upon and expand land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern.

The goals of the RTP/SCS are as follows:

- Encourage regional economic prosperity and global competitiveness.

- Improve mobility, accessibility, reliability, and travel safety for people and goods.
- Enhance the preservation, security, and resilience of the regional transportation system.
- Increase person and goods movement and travel choices within the transportation system.
- Reduce GHG emissions and improve air quality.
- Support healthy and equitable communities.
- Adapt to a changing climate and support an integrated regional development pattern and transportation network.
- Leverage new transportation technologies and data-driven solutions that result in more efficient travel.
- Encourage development of diverse housing types in areas that are supported by multiple transportation options.
- Promote conservation of natural and agricultural lands and restoration of habitats In accordance with federal and state laws, SCAG updates the RTP/SCS every 4 years to reflect changes in economic trends, state and federal requirements, progress made on projects and adjustments for population and jobs.

Regional Housing Needs Assessment

In accordance with Government Code Section 65584, projected housing needs for each city and county in the Southern California region are prepared by SCAG under a process known as the Regional Housing Needs Assessment (RHNA). RHNA allocates regional housing needs by income level among member jurisdictions.

California law established the planning period for the current RHNA from January 1, 2014, to October 31, 2021, which was the 5th RHNA cycle. SCAG's allocation for Carson for the 5th cycle RHNA was 1,698 units. The 1,698 housing units for Carson are out of the anticipated total need of 412,137 units for the SCAG Region (179,881 of which are from Los Angeles County). The allocation of 1,698 units for Carson is broken down into the four categories as follows: 263 very low-income households, 263 low-income households, 280 moderate-income households, and 708 above moderate-income households (SCAG 2012).

At the time of drafting this Draft EIR, the City of Carson, among all other jurisdictions within the SCAG region are required to update their respective Housing Elements to accommodate the 6th cycle of RHNA, which covers the planning period of October 2021 through October 2029. The California Department of Housing and Community Development provided SCAG a final regional determination of 1,341,827 units for the 6th cycle RHNA on October 15, 2019. Based on SCAG's determination of existing need and projected needs, which considers anticipated vacancies and projected household growth, the RHNA allocation to the City is 5,618 units, which includes 1,770 very low-income units, 913 low-income units, 875 moderate-income units, and 2,060 above-moderate units (SCAG 2021).

Local

City of Carson General Plan

The City of Carson General Plan is intended to provide direction for future development of the City. It represents a formal expression of community goals and desires, provides guidelines for decision making about the City's development, and fulfills the requirements of California Government Code Section 65302 requiring local preparation and adoption of General Plans. The General Plan should be viewed as a dynamic guideline to be refined as the physical environment of the City's changes. The General Plan includes the following mandated and optional elements: Land Use Element, Economic Element, Transportation Element, Housing Element, Safety Element, Noise Element, Open Space Element, Parks and Recreation Element, and Air Quality Element.

An update to the City of Carson's General Plan (General Plan) was adopted in 2004, though elements of the General Plan have been subsequently updated, such as the Land Use Element and Housing Element. In addition, the City of Carson is currently updating its General Plan with review and approval of key elements anticipated to occur in 2020. It is anticipated that the City will have comprehensively updated its General Plan and prepared an accompanying Environmental Impact Report by late-2022. The relevant portions of those General Plan Elements that directly address the growth and land issues (Land Use, Economic Development, Transportation and Infrastructure, Housing, Safety, Noise, Open Space and Conservation, Parks, Recreation, and Human Services, and Air Quality Elements) are discussed herein.

Land Use Element

The Land Use Element functions as a guide to City staff, the general public, and decision-makers as to the ultimate pattern of development for the City. The Land Use Element includes a General Plan Land Use Map that designates all parcels in the City with planned land uses. In addition to providing the framework for land use distributions and patterns through the General Plan Land Use Map, the Land Use Element also provides goals and policies intended to guide future development.

While the City is still evaluating land-use plan alternatives for the General Plan update, a Draft "preferred" land-use map identifies the Project site and surrounding area as within the proposed Downtown Mixed-Use Zone, which is proposed for the Project site and along Carson Street and Avalon Boulevard (City of Carson 2021a).

Per Draft General Plan documents, the Proposed Downtown Mixed-Use would be intended to promote a vibrant "Main Street" like ambiance throughout the downtown Carson core, with mid-rise (typically 55 feet/5 stories, or 85 feet/7–8 stories with community benefits), mixed-use development. The ground floor frontage (with the exception of ingress and egress and other necessary building and site design considerations) of sites along Carson Street, Avalon Boulevard, and Del Amo Boulevard would be devoted to active commercial uses; active commercial uses are those that are accessible to the general public, generate walk-in pedestrian clientele and contribute to a high level of pedestrian activity. Such uses include retail shops, restaurants, bars, theaters and the performing arts, commercial recreation and entertainment, personal and convenience services, leasing offices, private recreational areas, fitness studios, party rooms, building and hotel lobbies, banks, travel agencies, childcare services, libraries, museums, and galleries. Other parts of sites—at the ground level and at upper stories— may be devoted to commercial or residential uses (City of Carson 2021b).

For the purposes of this section of the Draft EIR, because the General Plan Update is in a draft form and will likely not be finalized or adopted until after the Project is considered, the impact analysis in this EIR will focus on the Project's compliance with existing adopted General Plan Goals and Policies, and any information pertaining to the General Plan Update is presented for informational purposes only.

The Project's consistency with the applicable goals and policies of the Land Use Element is provided in Section 4.9.4, Impacts Analysis.

Economic Development Element

The Economic Development Element is an optional element that the City chose to include in the 2004 General Plan. The Economic Development Element was most recently updated in 2013 and includes goals and objectives that address a variety of economic issues that are being addressed by the City.

The Project's consistency with the applicable goals and policies of the Economic Development Element is provided in Section 4.9.4.

Transportation and Infrastructure Element

The purpose of the Transportation and Infrastructure Element is to document the methods and results of the analysis of the existing and projected future circulation conditions in the City. As part of the General Plan, the document outlines Transportation and Infrastructure System policies and describes the future circulation system needed to support the Land Use Element. In addition, the Element addresses public utilities and infrastructure.

The Project's consistency with the applicable goals and policies of the Transportation and Infrastructure Element is provided in Section 4.9.4.

Housing Element

Consistent with state law, the Housing Element was most recently updated in 2014 and continues to provide for the City's housing needs and strategies through 2021. This includes the preservation and enhancement of the community's residential character, the expansion of housing opportunities for all economic segments, and the provision of guidance and direction for local government decision making in all matters related to housing.

The most recent RHNA Allocation Plan for the SCAG region, or the 5th Cycle was adopted in 2012 and covers the housing element planning period October 2013 to October 2021. The City is currently updating its Housing Element to be consistent with the 6th Cycle allocation, which will cover the planning period October 2021 through October 2029. Sixth cycle housing elements are due to the California Department of Housing and Community Development by October 15, 2021, and the California Department of Housing and Community Development is required to provide comments on submitted draft housing elements within 60 days of submittal. For the purposes of this section of the Draft EIR, the impact analysis will focus on the Project's compliance with the City's existing Housing Element because the California Department of Housing and Community Development has not yet certified the City's 6th Cycle Housing Element.

The Project's consistency with the applicable goals and policies of the current Housing Element is provided in Section 4.9.4.

Safety Element

The Safety Element evaluates potential natural and man-made hazards that have the potential to endanger the welfare and safety of the general public and aims to reduce the potential risk of death, injuries, property damage, and the economic and social dislocation resulting from them. The Safety Element identifies goals, policies, and implementation actions to reduce the impacts of hazards.

The Project's consistency with the applicable goals and policies of the Safety Element is provided in Section 4.9.4.

Noise Element

The Noise Element is a comprehensive program to limit the exposure of the community to excessive noise levels. The Element lists and maps current and projected noise levels for existing and planned uses within the City. The projected noise levels are used to guide future land decisions to limit noise and its effects on the community, including noise-sensitive land uses. The Noise Element establishes goals, policies, and programs to ensure that

Carson residents will be protected from excessive noise. Additionally, the Noise Element provides standards to assess noise impacts on specific land uses, including sensitive receptors.

The Project's consistency with the applicable goals and policies of the Noise Element is provided in Section 4.9.4.

Open Space and Conservation Element

The intent of the Open Space and Conservation Element is to recognize and conserve open space resources within the City. Government Code Section 65302(e) defines open space for the purpose of outdoor recreation as "areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes…and areas which serve as links between major recreation and open space reservations, including utility easements…trails, and scenic highway corridors." Open space in the City is comprised of Recreational Open Space and General Open Space. Park areas in the City are considered Recreational Open Space areas. Utility transmission corridors, drainage and flood control facilities, and the Blimp Port comprise the City's General Plan Open Space.

The Project's consistency with the applicable goals and policies of the Open Space and Conservation Element is provided in Section 4.9.4.

Parks, Recreation, and Human Services Element

The Parks, Recreation and Human Services Element identifies a need for additional recreational facilities, enhanced safety and maintenance of parks, and affordable community recreation and education programs.

The Project's consistency with the applicable goals and policies of the Parks, Recreation, and Human Services Element is provided in Section 4.9.4.

Air Quality Element

The Air Quality Element is intended to protect the public's health and welfare by implementing measures that allow the South Coast Air Basin to attain Federal and State air quality standards that will move toward a sustainable level of air quality. To achieve this goal, the Element sets forth a number of programs to reduce current pollution emissions and to require new development to include measures to comply with air quality standards. In addition, this Element contains provisions to address air quality requirements.

The Project's consistency with the applicable goals and policies of the Air Quality Element is provided in Section 4.9.4.

City of Carson Municipal Code

Article IX, Planning and Zoning

Chapter 1, Zoning Regulations

Article IX, Chapter 1, of the Carson Municipal Code, contains the City's Zoning Ordinance. This includes regulations concerning where and under what conditions various land uses may occur in the City. It also establishes zone-specific height limits, setback requirements, parking ratios, and other development standards, for residential, commercial, industrial, and all other types of land uses.

Chapter 2, Subdivision Regulations

Article IX, Chapter 2, of the Carson Municipal Code, provides procedures for the approval of a tentative map that provides vested rights to the applicant. The approval of a vesting tentative map confirms that the proposed development has the right to proceed with a development that is in substantial compliance with City's ordinances, policies, and standards, effective the date the City determine the application complete.

Proposed Imperial Avalon Specific Plan

Development Standards and Regulations

The proposed Imperial Avalon Specific Plan (IASP) will set forth development standards and regulations that are intended to supplement the existing General Plan and Zoning Code and to govern new construction within the Project site. Where the IASP is inconsistent with the Zoning Code, the IASP will prevail. Where the IASP does not specifically regulate or is silent, development must comply with the standards and requirements set forth in the Zoning Code. The development standards would govern permitted uses, building intensity, building design, dwelling unit size, setbacks, parking and loading, landscaping, lighting, signage, fire standards, noise attenuation, trash and recycling, ground-floor security, and other issues.

Administration

The development standards contained within the IASP would be administered and enforced by the City in accordance with the Municipal Code. The IASP provisions would take precedence over the requirements of the zoning code of the Municipal Code. If not specifically addressed in the IASP, the applicable provisions of the Municipal Code shall apply. The IASP would set forth procedures that identify review authority and review processes.

4.9.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to land use and planning are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to land use and planning would occur if the Project would:

1. Physically divide an established community.
2. 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.
3. Result in a cumulatively considerable land use and planning impact.

4.9.4 Impacts Analysis

Would the Project physically divide an established community?

Less-than-Significant Impact. The physical division of an established community typically refers to the construction of a linear feature (e.g., a major highway or railroad tracks) or removal of a means of access (e.g., a local road or bridge) that would impair mobility within an existing community or between a community and outlying area.

As described above, the Project site is located in a largely developed part of the City, characterized by a mix of residential and commercial uses. The Project site is bound by a concrete-lined channel to the north, South Avalon Boulevard to the east, East 213 Street to the south, and Grace Avenue to the west. The proposed Project involves the implementation of the IASP. The Project includes the removal and/or demolition of existing on-site structures and buildings and the construction of a mixed-use development.

Under the existing condition, the Project site is developed land and does not provide any connection between established communities. Instead, connectivity within the area surrounding the Project site is facilitated via local roadways. The Project does not include the construction of a new barrier that would impair mobility within the existing Project site or the surrounding area. Local connectivity in the area surrounding the Project site, including along South Avalon Boulevard, East 213 Street, and Grace Avenue, would be maintained. Additionally, the Project would improve connectivity within the Project area by providing a number of pedestrian and bicycle ways, including a pedestrian bridge that would link the Project site and the proposed District at South Bay project[1] that would provide access through the Project site.

As discussed in greater detail in Section 4.11, Population and Housing, the Project would result in the removal of the existing Mobile Home Park. The closure of the Mobile Home Park was approved by the City Council in July 2020 and the Mobile Home Park owner is proceeding with closure of the Mobile Home Park in accordance with mitigation measures identified in Relocation Impact Report No. 05-20. While the Project would not directly result in the relocation of the Mobile Home Park, it would result in the removal of the Mobile Home Park's residential units. However, upon completion, the Project would result in the development of a mixed-use residential neighborhood with 988 net new residential units.

As such, the Project would not impede movement within the Project area, within an established community, or from one established community to another. Therefore, impacts associated with the division of an established community would be **less than significant**.

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?

Less-than-Significant Impact. To evaluate the Project's impacts related to land use and planning, this analysis examines the Project's consistency with both regional and local plans, policies, and regulations that regulate uses on the Project site. These plans are as follows:

- SCAG 2020–2045 RTP/SCS
- City of Carson General Plan
- City of Carson Municipal Code

[1] As described in Section 4.9.1, Existing Conditions, the District at South Bay project involves the involves the development of residential, regional commercial, industrial/logistics, community serving commercial/retail, and active and passive open space uses.

Regional Transportation Plan/Sustainable Communities Strategy

The Project's consistency with 2020–2045 RTP/SCS Goals, as included in Table 4.9-1, demonstrates that the Project would not conflict with the applicable goals in the RTP/SCS adopted for the purpose of avoiding or mitigating an environmental effect.

Table 4.9-1. Consistency with 2020–2045 RTP/SCS Goals

RTP/SCS Goal	Project Applicable Component(s)
Goal 1: Encourage regional economic development and global competitiveness.	**Consistent.** The Project is designed to facilitated development of 1,213 residential units and approximately 10,352 square feet of commercial uses within the Project site. The addition of new housing would be along a major corridor (Interstate [I] 405) and in proximity to a number of new proposed developments (see Figure 3-2, Existing and Surrounding Land Uses, in Chapter 3, Project Description). As such, the Project would improve regional economic development by introducing new housing units in proximity to a major transportation corridor (i.e., I-405) and new commercial and residential developments within the City. Additionally, the Project would expand the number of consumers in the economic region and would provide new economic opportunities through the development of neighborhood-serving commercial uses. Therefore, the Project is consistent with this goal.
Goal 2: Improve mobility, accessibility, and travel safety for people and goods.	**Consistent.** The Project would maximize mobility and accessibility for residents in the Project vicinity by providing multimodal access to the Project site, including vehicle access and walking/bicycle paths into the Project site. Within the Project site, pedestrian and bicycle facilities could access the pathways intervening between each of the proposed buildings. The Project would also provide several driveway entrances for vehicles. Moreover, the Project's location would provide residential opportunities in proximity to nearby freeways (I-405 and I-110), and nearby transit systems. The Project area is served by the Carson Circuit local bus system and is planned to be served by new Long Beach Transit bus routes, which provides connectivity to multiple regional transit lines, including the Torrance Transit System, Gardena Municipal Bus System, Long Beach Transit System, and Los Angeles County Metropolitan Transportation Authority (LA Metro) System. Within the immediate area of the Project site, bus stops are currently located on the northeast and southwest corners of the intersection of Avalon Boulevard and 213th Street and at the intersection of Avalon Boulevard and Carson Street. See Chapter 4.13, Transportation, for further details.
Goal 3: Enhance the preservation, security, and resilience of the regional transportation system.	**Consistent.** The Project would provide new living opportunities in close proximity to bus transit, thereby increasing ridership. Public transit that operates in the vicinity of the Project site are addressed under Goal 2. Thus, by ensuring new residents have the opportunity to travel via transit systems to and from the Project site, the Project provides a long-term rider base to the transportation system. In addition, new development along existing transit routes enhances the security along these routes and preserves the system through increasing demand.
Goal 4: Increase person and goods movement and travel choices within the transportation system.	**Consistent.** The Project site is served by existing pedestrian, bus, and vehicle transportation options. The Project would increase the mix of land uses through development of multifamily and townhome units, adjacent to existing single-family and commercial uses. The increased

Table 4.9-1. Consistency with 2020–2045 RTP/SCS Goals

RTP/SCS Goal	Project Applicable Component(s)
	diversity of uses on the Project site would allow future residences to access the existing transportation system. As such, the Project would increase the accessibility to the transportation and increase the persons using the mass-transit infrastructure. Additionally, development of the Project in its location, which is proximate to bus stops, regional freeways, bicycle lanes, and pedestrian facilities would maximize the travel choices available to future residents, employees, and visitors of the Project. Therefore, the Project is consistent with this goal.
Goal 5: Reduce greenhouse gas emissions and improve air quality.	**Consistent.** The Project would support the use of the existing and proposed pedestrian, bicycle, and mass-transit infrastructure and connectivity. Less reliance on automobiles and support for multi-modal transportation would help reduce greenhouse gases (GHGs) and improve air quality. Tables 4.6-3 through 4.6-5 in Section 4.6, Greenhouse Gas Emissions, demonstrate that the Project complies with or exceeds the plans, policies, regulations and GHG reduction actions/strategies outlined in the Climate Action Plan, 2017 Scoping Plan, and 2020–2045 RTP/SCS. Therefore, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHGs. Furthermore, because the Project is consistent and does not conflict with these plans, policies, and regulations, the Project's incremental increase in GHG emissions as described above would not result in a significant impact on the environment. Other Transportation Demand Management measures proposed as part of the Project further maximize multi-modal transportation. As further described in Chapter 4.13, Transportation, the Project's vehicle miles traveled (VMT) per service population (10.1) would be 30% below the City's average VMT (14.40). Thus, the Project would not result in significant VMT impacts that further contribute to GHG emissions. In addition, the Project allows land use designations which creates a mix of land uses that are within walking distance of one another, and streets that are attractive to pedestrians. Therefore, the Project is consistent with this goal.
Goal 6: Support healthy and equitable communities.	**Consistent.** The Project allows land use designations which creates a mix of land uses for the surrounding area that are within walking distance of one another. Thus, the Project would promote healthy, walkable communities. Further, the Project would seek to provide additional housing opportunities in a variety of housing sizes, types, and densities to support an equitable community. The proposed Project would contribute housing and employment opportunities to a jobs-rich community, thereby contributing to a more balanced local economy. Additionally, the mix of land uses in the Project area would support the health and equity of the community by reducing VMT, thereby reducing air quality for residents in the region. Therefore, the Project is consistent with this goal.
Goal 7: Adapt to a changing climate and support an integrated regional development pattern and transportation network.	**Consistent**. As climate change continues to increase the number of instances of disruption to local and regional systems, it will become increasingly more urgent for local jurisdictions to employ strategies to reduce their individual contributions. Development of the Project as high-density housing would assist the City in reducing its contribution to climate change by reducing VMT and GHG emissions. The Project would

Table 4.9-1. Consistency with 2020–2045 RTP/SCS Goals

RTP/SCS Goal	Project Applicable Component(s)
	also result in the installation of more efficient stormwater infrastructure within the Project site that would be better equipped to handle extreme weather events. Lastly, development of the Project would integrate new residential and commercial uses within an established community, which would be consistent with and support an established regional development pattern.
Goal 8: Leverage new transportation technologies and data-driven solutions that result in more efficient travel.	**Consistent.** To further facilitate transit and active transportation, the land use designations of the Project are designed to mix residential uses with supporting amenities (i.e., bicycle parking) so that residents do not need to use a car to access basic needs throughout the day. The Project site is located within an urbanized portion of Los Angeles County with access to regional transportation systems that can use new transportation technologies and data driven solutions to provide more efficient travel. The mix of uses in an established urban downtown area would reduce VMT and result in shorter trip lengths that are more conducive for new transportation technologies, such as ridesharing apps to be used by residents, employees, and visitors accessing the Project site. The Project would also include electric vehicle charging stations as specified in Title 24 and CALGreen standards that would better enable future residents, employees, and visitors to take advantage of improvements in electric vehicle technology.
Goal 9: Encourage development of diverse housing types in areas that are supported by multiple transportation options.	**Consistent.** The Project would place both for-sale townhomes, and for-rent housing types, including age-restricted senior units, within an area that is supported by multiple transportation options, including public transportation routes, pedestrian facilities, and bicycle facilities. The residential units include studios, one- and two-bedroom rental units, and townhomes to encourage diverse housing types within the City. The Project would develop a mixed-use, pedestrian-oriented development with access to alternative modes of transportation.
Goal 10: Promote conservation of natural and agricultural lands and restoration of habitats.	**Not Applicable.** The Project site is located in a highly urbanized area away from existing agricultural lands and habitat. Given the Project would redevelop an existing, infill site, the proposed Project would not encroach upon agricultural lands and natural habitat.

City of Carson General Plan

Currently, the Project site has General Plan land use designations of Regional Commercial (east) and Low Density Residential (west) and is developed with a mobile home park. Per the City's General Plan, the Regional Commercial land use designation is intended to support a range of commercial uses such major department stores, specialty shops, other retail and service uses, automobile and other vehicle dealerships, and hotels and motels. The Low Density Residential land use designation is intended to support single-family detached dwellings and other development considered harmonious with such low-density residential development.

Under these existing conditions, the portion of the mobile home park that is located within the Regional Commercial land use designation operates as a non-conforming use as residential uses are not permitted within the Regional Commercial General Plan land use designation.

The Project involves a General Plan Amendment that would change the Project site's General Plan land use designation from Regional Commercial and Low Density Residential (see Figure 3-3, Existing and Proposed Land Use Designations, in Chapter 3) to Urban Residential. Per the General Plan, the Urban Residential General Plan land use designation is intended to provide for multiple dwelling units and a range of commercial uses, including retail, offices, hospitals, and private community gathering facilities. Residential densities up to 65 du/ac are allowed. The allowable density/intensity for mixed-use development is determined using an allowable range of floor area ratio (1.0 to 4.0). This land use designation is intended to be implemented with a Specific Plan zone. In this case, the IASP would implement the Urban Residential General Plan land use designation and would provide a means of implementing the City's General Plan.

Upon approval of the General Plan Amendment, the Project would be compatible with the Urban Residential land use designation. The IASP would allow for development of multiple dwelling units and select commercial, office, and medical-related uses. The IASP would allow for a gross Project density of 45 du/ac across the IASP area. The IASP would limit floor area ratio to a maximum of 1.5:1 as calculated over the entire Project area where buildings contain a mix of residential and commercial. Additionally, the specific development proposal, and any future development proposal in the IASP boundaries that may come thereafter, would be required to be consistent with the IASP. In the case of the proposed specific development proposal, the development would involve a mix of residential and neighborhood serving commercial uses that would be consistent with both the IASP and the Urban Residential General Plan land use designation. The proposed development that is part of the Project would involve the development of a mixed-use development featuring residential, commercial, and open space uses. The development would have a maximum gross density of 44.4 du/acre, and a floor area ratio of 1.26:1. This information is presented in Table 4.9-2, which provides a comparison of the intent and regulations of the Urban Residential General Plan land use designation and the Project. As provided, the Project, inclusive of the proposed development and IASP, would be consistent with the intent and regulations of the Urban Residential General Plan land use designation.

Table 4.9-2. Project's Consistency with Urban Residential General Plan Land Use Designation

Regulation	Urban Residential General Plan Land Use Designation	Imperial Avalon Specific Plan
Intent/Allowed Uses	Provide for multiple dwelling units and a range of commercial uses, including retail, offices, hospitals, and private community gathering facilities	Allows for development of multiple dwelling units and select commercial, office, and medical-related uses
Density	Residential densities up to 65 dwelling units per acre (du/ac) are allowed	Residential densities of 45 du/ac (gross) across the Imperial Avalon Specific Plan area
Floor Area Ratio (FAR)	1.0 to 4.0	Would limit FAR to 1.5:1
Consistent with Urban Residential Designation?	—	Yes

Approval of the General Plan Amendment would resolve conflicts between both the existing uses and the existing land use designations and the proposed uses. Nonetheless, the Project would still need to be consistent with the goals and policies of the General Plan.

Table 4.9-3 provides a consistency analysis for the Project and the City's applicable General Plan elements. General Plan elements evaluated for consistency include the Land Use, Economic Development, Transportation and Infrastructure, Housing, Safety, Noise, Open Space and Conservation, Parks, Recreation, and Human Services, and Air Quality Elements. Goals and policies that were not included in Table 4.9-3 were not included because they may either not be relevant to the Project (e.g., they pertain to industrial development and the Project does not involve industrial uses) or they may be City-level goals and policies that are implemented by the City (e.g., they may recommend that the City provide incentives for desired commercial uses; the Project Applicant would not be required to implement this measure and the Project would not impede the City in implementing this measure). The Project's consistency with the applicable goals and policies of the General Plan Elements, as included in Table 4.9-3, demonstrates that the Project would not conflict with the General Plan goals and policies that have been adopted for the purpose of avoiding or mitigating an environmental effect.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Land Use Element Goals/Policies	
Goal LU-3: Removal of incompatible and non-conforming uses which detract from the aesthetics and safety of the community.	**Consistent.** Currently, the Project site is developed with the Imperial Avalon Mobile Estates mobile home park that is located within the Regional Commercial General Plan land use designation. The Project would enhance the aesthetics of the community through implementation of the Imperial Avalon Specific Plan (IASP). The IASP would create a cohesive character for the Project site through development standards and design guidelines to encourage the highest quality of design. The aesthetic design goal of the proposed Project is to provide a form, proportion, and articulation that relates to similar architectural approaches throughout the urban areas of the City and maintains a clean and streamlined composition conveyed in a contemporary manner. As a whole, the Project utilizes a step-up approach, which involves increasing height towards the internal portion of the Project site to reduce the overall massing along street frontages and adjacent to the established single-family homes. The Project would provide compatible residential uses in relation to other residential and neighborhood commercial uses, and remove the existing non-conforming land use. Introduction of residential buildings to the Project site would not pose safety risks to the surrounding neighbors, such as through public health hazards, excessive mechanical noise, and/or pedestrian/bicyclist safety.
Goal LU-6: A sustainable balance of residential and non-residential development and a balance of traffic circulation throughout the City.	**Consistent.** The Project would result in the construction of four multi-story residential buildings, providing 833 dwellings units, 380 townhome residential units, and 10,352 square feet of commercial areas . Thus, the Project incorporates both residential and non-residential uses that complement each other. Additionally, as discussed in Section 4.11, Population and Housing, the Project would contribute to greater jobs/housing balance in the City. Further, as discussed in Section 4.13, Transportation, the Project would reduce vehicle miles traveled (VMT) through the provision of a mixture of uses, and promotion of walkability.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Policy LU-6.2: Achieve a sustainable land use balance through provision of incentives for desired uses; coordination of land use and circulation patterns; and promotion of a variety of housing types and affordability.	**Consistent.** The Project would achieve a sustainable land use balance within the City by increasing the jobs/housing balance. As discussed in Section 4.11, Population and Housing, the City is providing more jobs than it is housing, reflective of the City's stature as an employment center. While the City's ratio is expected to decrease in the future, it would still remain a jobs-rich area under the Southern California Association of Governments projections. Thus, the inclusion of 833 dwelling units and 380 townhome residential units would promote both a balance of uses and promote a variety of housing types and affordability in the City. As previously mentioned, as discussed in Section 4.13, Transportation, the Project would reduce VMT through the provision of a mixture of uses, and promotion of walkability. Thus, the Project would coordinate land use and circulation patterns.
Policy LU-6.3: Consider establishing minimum land use density requirements in certain areas such as mixed-use zones to provide more efficient, consistent, and compatible development patterns while also promoting greater potential for pedestrian and transit-oriented development.	**Consistent.** The Project would amend the General Plan Land Use designation to Urban Residential, which would allow densities up to 65 dwelling units per acre. The IASP would allow for a maximum density of 45 dwelling units per acre. These densities would provide for efficient, consistent, and compatible development patterns with the vision for a mixed-use downtown area within the City's core. To further facilitate transit and active transportation, the land use designations of the Project are designed to mix residential uses with supporting amenities (i.e., bicycle parking) so that residents do not need to use a car to access basic needs throughout the day. The Project site is served by existing pedestrian, various municipal, rapid and circulator bus routes, and vehicle transportation options such as proposed/planned bike facilities in the area; therefore, promotes greater potential for pedestrian and transit-oriented development.
Policy LU-6.6: Attract land uses that generate revenue to the City of Carson, while maintaining a balance of other community needs such as housing, open space, and public facilities.	**Consistent.** The Project includes café and restaurant uses that would generate tax revenue for the City while incorporating housing and green space within the Project site for a growing population.
Goal LU-7: Adjacent land uses that are compatible with one another.	**Consistent.** The Project is generally bordered to the north by a concrete-lined channel and the proposed District at South Bay project; to the south and east by an auto-dealership, multifamily, and retail uses; and to the west by single-family residential. The Project would include multifamily dwelling units and townhomes, with associated open space, restaurant, and café uses. Such uses are compatible with the surrounding residential and commercial uses.
Goal LU-8: Promote mixed-use development where appropriate.	**Consistent.** The Project, as a mixed-use project, is consistent with the City's ongoing effort to develop new mixed-use corridors. The Project site is located within close proximity to the Carson Street mixed-use corridor which involves a mix of land uses.
Policy LU-8.3: Locating higher density residential uses in proximity to commercial	**Consistent.** The Project proposes a higher density residential use. As previously mentioned, the Project is in close proximity to the

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
centers to encourage pedestrian traffic and provide a consumer base for commercial uses.	proposed District at South Bay project. The proposed pedestrian bridge would connect to the District at South Bay 2021 project. Additionally, the Project is less than 0.5 miles north of Carson Street, which includes several neighborhood commercial areas. This close proximity would benefit both the on-site and off-site businesses and residents.
LU-11: Develop one or more "Signature Project" to create a focal point or points for the City.	**Consistent.** The Project is located near I-405 and thus would serve as a focal point within the community. As previously discussed in Goal LU-3, the Project would enhance the aesthetics of the community through implementation of the IASP and construction of a Project featuring high-quality architectural designs. The IASP would create a cohesive character for the Project site through development standards and design guidelines to encourage the highest quality of design.
LU-12.3 Review landscape plans for new development to ensure that landscaping relates well to the proposed land use, the scale of structures, and the surrounding area.	**Consistent.** The IASP contains development standards and regulations for placement of landscaping throughout the Project site. All implementing projects under the IASP are required to undergo site plan review by City staff to ensure that landscaping is consistent with the IASP and relates well to the proposed land use, the scale of structures, and the surrounding area.
LU-12.5 Improve City appearance by requiring landscaping to screen, buffer, and unify new and existing development. Mandate continued upkeep of landscaped areas.	**Consistent.** As shown in Figure 3-9, Conceptual Landscape Plan, in Chapter 3, internal and external landscaping is proposed on the Project site. The plant palette would incorporate the use of small shrubs, grasses, evergreen trees, accent/flowered trees, and palms along the interior and exterior. The proposed irrigation system would aid in the upkeep of landscaped areas.
Goal LU-13: Encourage interesting and attractive streetscapes throughout Carson.	**Consistent.** The Project would reflect the design concepts set forth in the Carson Street Master Plan. Avalon Boulevard has an existing landscaped median. As previously discussed, the Project would incorporate the use of small shrubs, grasses, evergreen trees, accent/flowered trees, and palms along the interior and exterior of the Project site. Additionally, as shown in Figures 3-6a through 3-6d, Architectural Elevations, in Chapter 3, the Project includes a contemporary style with architectural projections (i.e., balcony and signage) to provide visual interest and an attractive streetscape along Avalon Boulevard.
Policy LU-13.1: Promote a rhythmic and ceremonial streetscape along the City's arterial roadways, continuing the use of landscaped medians.	
Policy LU-13.3: Continue and, when possible, accelerate the undergrounding of utility lines throughout the City.	**Consistent.** As discussed in Section 4.14, Utilities and Service Systems, there is currently a mix of above and underground electrical and telecommunication facility lines on or adjacent to the Project site. Proposed and existing utility connections would be undergrounded.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Policy LU-13.4: Encourage architectural variation of building and parking setbacks along streetscape to create visual interest, avoid monotony and enhance the identity of individual areas. Encourage pedestrian orientation by appropriate placement of buildings.	**Consistent.** As previously described in Chapter 3, Project description, the Project utilizes a step-up approach, which involves increasing height towards the internal portion of the Project site to reduce the overall massing along street frontages. The aesthetic design goal of the proposed Project is to provide a form, proportion, and articulation that relates to similar architectural approaches throughout the urban areas of the City and maintains a clean and streamlined composition conveyed in a contemporary manner. The mixed-use buildings are intended to create a walkable, residential community within an urban context. Additionally, parking would be primarily in structures or in garages, and would therefore, not be visible from the streets. The view for pedestrians along the sidewalk would primarily be the buildings and associated landscaping to create visual interest and encourage pedestrian access.
Policy LU-13.5: Continue to require landscaping treatment along any part of a building site which is visible form City streets.	**Consistent.** The IASP contains development standards and regulations for placement of landscaping throughout the Project site. As shown in Figure 3-9, Conceptual Landscape Plan, in Chapter 3, internal and external landscaping is proposed on the Project site, consistent with the development standards and regulations of the IASP. The plant pallet would incorporate the use of small shrubs, grasses, evergreen trees, accent/flowered trees, and palms along the interior and exterior. Additionally, the proposed landscaping plan would be reviewed by the Planning Commission and City Council as part of the proposed Project.
Goal LU-14: Enhance freeway corridors and major arterials which act as gateways into the City of Carson.	**Consistent.** The Project is located near I-405 and thus would serve as a gateway to the City and would create a welcome setting for all users and observers of the area. The Project itself would enhance visual interest on the Project site through a contemporary style with architectural projections (i.e., balcony and signage), and a new landscaping plan for the interior and exterior. Further, implementation of the IASP would create development standards and design guidelines for the Project site.
Goal LU-15: Promote development in Carson which reflects the "Livable Communities" concepts.	**Consistent.** The Project would address urban sprawl through developing high density residential uses within an infill Project site in close proximity to commercial uses and transit options. Additionally, the Project addresses neighborhood safety through providing compatible residential uses in relation to other residential and neighborhood commercial uses. Introduction of residential buildings to the Project site would not pose safety risks to the surrounding neighbors, such as through public health hazards, excessive mechanical noise, and/or pedestrian/bicyclist safety. Additionally, the Project site has interior surface parking and exterior landscaping to promote pedestrian access around the site.
Policy LU-15.1: Encourage the location of housing, jobs, shopping, services and other activities within easy walking distance of each other.	**Consistent.** The Project would locate high density residential uses within walking distance of several neighborhood commercial shopping centers along Carson Street. The mix of uses would reduce VMT and facilitate walkability.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Policy LU-15.2: Maintain a diversity of housing types to enable citizens from a wide range of economic levels and age groups to live in Carson.	**Consistent.** The Project itself would introduce 833 multifamily dwelling units and 380 townhome residential units. The Project would contribute to an increased diversity of housing types within the City by introducing new types in an area predominately surrounded by single-family dwelling units. Additionally, 180 of the multifamily dwelling units would be age-restricted senior independent living units. Thus, further contributing to a range of age groups in the City. The Project would not prohibit the City from including more housing types of a wider range of economic levels and age groups than those offered by the Project.
Policy LU-15.6: Ensure development of pedestrian-oriented improvements which provide better connections between and within all developments while reducing dependence on vehicle travel.	**Consistent.** Overall, the Project is designed with the intent of creating a walkable residential community within an urban context. The Project would implement strong vehicular and pedestrian connectivity to respond to the mixed-use nature of the development. This would be accomplished by employing an internal pedestrian greenbelt linkage concept to provide an internal circulation pattern that embraces and implements the theme of flexibility in routes and provides additional areas of human activity and interaction. The Project would also involve the construction of a pedestrian bridge over the Los Angeles County Flood Control channel to the north of the site that would provide pedestrian connectivity between the development located within the District Specific Plan Area to the north and the hub of activity in the downtown area near Avalon Boulevard and Carson Street.
Policy LU-15.7 Provide for the efficient use of water through the use of natural drainage, drought tolerant landscaping, and use of reclaimed water, efficient appliances, and water conserving plumbing fixtures.	**Consistent.** The Project would incorporate elements of the Los Angeles Department of Water and Power low-impact development (LID) strategies and would use low water-usage landscaping. The landscape would be designed with predominantly drought tolerant species and would adhere to Water Efficient Landscape Ordinance (WELO) requirements.
Policy LU-15.8: Ensure that the street orientation, placement of buildings and the use of shading in existing and new developments contribute to the energy efficiency of the community.	**Consistent.** The Project would incorporate energy efficiency design features in compliance with the California Building Code (Title 24) and CALGreen standards that are consistent with the City's Climate Action Plan's efficiency measures.
Economic Development Element	
Policy ED-1.2: Encourage the development of quality housing.	**Consistent.** The Project would construct 833 dwelling units and 380 townhomes through implementation of the IASP. The IASP would include development standards and design guidelines to ensure quality housing.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Policy ED-7.2: Improve the actual and perceived image of the City through improved design standards, amenities, security, continuing public improvements and positive advertising campaigns.	**Consistent.** The Project would improve the image of the City through the implementation of the IASP. The IASP would create a cohesive character for the Project site through development standards and design guidelines to encourage the highest quality of design. Additionally, as shown in Figure 3-9, Conceptual Landscape Plan, in Chapter 3, the Project would include natives and seasonal ornamental plantings to provide interest in color and texture in locations with natural light. The aesthetic design goal of the proposed Project is to provide a form, proportion, and articulation that relates to similar architectural approaches throughout the urban areas of the City and maintains a clean and streamlined composition conveyed in a contemporary manner. Additionally, the Project is located on Avalon Boulevard, near I-405, and would be visible to those entering the City.
Goal ED-8: Coordinate economic development within the region to enhance opportunities.	**Consistent.** The Project is designed to facilitated development of 1,213 residential units and approximately 10,352 square feet of commercial within the Project site. The addition of new housing would be along a major corridor (I-405) and in proximity to a number of new proposed developments within the City, including the proposed District sites (see Figure 3-2, Existing and Surrounding Land Uses, in Chapter 3, Project Description). As such, the Project would improve regional economic development by introducing new housing units in proximity to a major transportation corridor and new commercial and residential developments within the City. Additionally, the Project would expand the number of consumers in the economic region and would provide new economic opportunities through the development of neighborhood-serving commercial uses that would attract a variety of visitors from throughout the region.
Goal ED-10: Develop one or more "Signature Projects" to create focal points and identity for the City	**Consistent.** The Project is located near I-405, and thus would serve as a focal point within the community. As previously discussed in Goal LU-3, the Project would enhance the aesthetics of the community through implementation of the IASP. The IASP would create a cohesive character for the Project site through development standards and design guidelines to encourage the highest quality of design.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Policy ED-10.2: Encourage development of desired uses such as quality retail, restaurant uses, and entertainment in targeted areas.	**Consistent.** The Project includes residential units as well as restaurant uses within the boundaries of the Project site.
Transportation and Infrastructure Element	
Goal T-1: Minimize impacts associated with truck traffic through the City, as well as the truck parking locations.	**Consistent.** As discussed in Section 4.13, Transportation, construction of the Project would have less than significant impacts related to truck traffic. Because the Project is proposing residential and restaurant uses, once operational, it would not generate a significant amount of truck trips or require truck parking locations. Truck trips associated with the restaurant/café uses would typically be periodic and involve light duty delivery trucks. These trucks would use assigned loading spaces within the parking areas proposed on the Project site.
Policy TI-2.1: Require that new projects not cause the Level of Service for intersections to drop more than one level if it is at Level A, B or C, and not drop at all if it is at D or below, except when necessary to achieve substantial City development goals.	**Consistent.** As discussed in Section 4.13, Transportation, pursuant to SB 743, transportation impacts are measured using VMT metric per updated CEQA Guidelines. Therefore, potential physical or operational roadway improvements for adverse level of service effects identified at signalized or unsignalized study area intersections per City's General Plan consistency criteria have been identified in the Project's transportation assessment (Appendix I). With implementation of PDF-TRA-1 (signalization of the Grace Avenue/213th Street intersection), the Project would not cause the Level of Service for intersections to drop more than one level if it is at Level A, B, or C, and not drop at all if it is at D or below.
Policy TI-2.7: Provide all residential, commercial and industrial areas with efficient and safe access to major regional transportation facilities.	**Consistent.** The Project is located adjacent to I-405, providing regional access. The Project has designated driveway access via Avalon Boulevard and Grace Avenue. As discussed in Section 4.13, Transportation, the Project would provide efficient and safe ingress and egress facilities.
Goal TI-3: Minimize intrusion of commuter traffic on local streets through residential neighborhoods.	**Consistent.** While this is primarily a City-level goal aimed at minimizing cut-through traffic on local streets through residential neighborhoods, the Project would also minimize traffic that would use local streets within residential neighborhoods, as the Project's primary access would be located on Avalon Boulevard, which is well connected to the City's arterial roadways, as well as to I-405 located immediately north of the Project site, reducing the potential for commuter traffic from the Project site intruding on neighborhoods.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Policy TI-4.2: Provide appropriate pedestrian access throughout the City. Develop a system of pedestrian walkways, alleviating the conflict between pedestrians, automobiles and bicyclists where feasible.	**Consistent.** The Project would enhance the streetscape through increased landscaping and design of the buildings, thereby improving the pedestrian experience for those along Avalon Boulevard. Additionally, the Project site has interior surface parking and exterior landscaping to promote pedestrian access around the site. Further, the Project includes landscaped pedestrian facilities and greenbelts throughout the Project site to alleviate conflict with pedestrians, automobiles, and bicyclists, where feasible.
Goal TI-5: Use Transportation Demand Management (TDM) measures throughout the City, where appropriate, to discourage the single-occupant vehicle, particularly during the peak hours. In addition, ensure that any developments that are approved based on TDM plans incorporate monitoring and enforcement of TDM targets as part of those plans. **Policy TI-5.1:** Ensure that Transportation Demand Management (TDM) policies are considered during the evaluation of new developments within the City, including but not limited to: ridesharing, carpooling and vanpooling, flexible work schedules, telecommuting and car/vanpool preferential parking.	**Consistent.** The Project would include TDM measures to reduce single-occupant vehicle use (further describe in Appendix I, Local Transportation Assessment). Proposed TDM measures include • **Senior Housing Shuttle.** The Project's senior housing component would provide a regularly scheduled shuttle service for residents to access shopping and services in the surrounding area. The shuttles would transport groups of residents for each trip. Thus, this service would reduce the need for single-occupant vehicle trips to and from the Project site. • **Unbundled Parking.** For the for-rent units, the monthly rent expense allocated to parking would be "unbundled" as a separate, optional line item for residents of the for-rent apartment units. Unbundling the expense of parking would allow tenants to more consciously weigh the costs and benefits of purchasing additional parking spaces and incentivizes reduced overall vehicle occupancy. • **Car Sharing Program.** The Project would include designated parking spaces for car sharing vehicles. Car sharing programs allow greater flexibility for residents who do not own a vehicle but may occasionally require a vehicle for some trips, such as: furniture shopping, recreational activities, visiting family and friends in suburban/rural locations, etc. • **Workstation Areas.** The Project's amenity spaces for residents would include workstation areas to facilitate telecommuting. Each resident telecommuter can potentially reduce daily single-occupant vehicle trips, especially peak hour trips.
Goal TI-7: Provide improved aesthetic enhancements to and maintenance of the City's transportation corridors. **Policy TI-7.3:** Target and prioritize street beautification programs along major transportation corridors.	**Consistent.** The recommended design guidelines in the IASP reflects the design concepts set forth in the Carson Street Master Plan. The Project would include landscape improvements to Avalon Boulevard, to be reviewed by the City as part of site plan review.
Goal TI-8: Provide sustainable water and wastewater systems which meet the needs of the community.	**Consistent.** The Project proposes to incorporate efficiency measures related to water use and wastewater systems in compliance with Title 24 and CALGreen standards. The Project would incorporate elements of the Los Angeles Department of Water LID strategies and would use low water-usage landscaping. The landscape would be designed with predominantly drought-tolerant species.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Policy TI-8.2: As development intensifies and/or as land redevelopment occurs in the City, ensure that infrastructure systems are adequate to accommodate any intensification of use, as well as existing uses.	**Consistent.** As outlined in Chapter 4.14, Utilities and Service Systems, existing infrastructure in the vicinity of the Project sites can adequately serve the Project.
Goal TI-9: Promote sustainable energy, communication, and other systems which meet the needs of the community.	**Consistent.** The Project would incorporate energy efficiency design features in compliance with the California Building Code (Title 24) and CALGreen standards that are consistent with the City's Climate Action Plan's efficiency measures.
Policy TI-9.1: Cooperate with the providers of the energy, communication, and other systems in Carson to maintain, improve, expand, and replace (when necessary) these systems throughout the City as good partners.	**Consistent.** As discussed in Section 4.14, Utilities and Service Systems, a will serve letter request was sent to Southern California Edison. For communication, a will serve letter request has been sent to Charter Communications. The Project would involve the extension of existing infrastructure to serve the new development, and there are no service upgrades expected at this time (Appendix L-2, Utilities Technical Memorandum).
Policy TI-9.2: As development intensifies and/or as redevelopment occurs in the City, encourage the provision of integrated communication and other systems to accommodate any intensification of uses, as well as existing uses.	
Housing Element	
Goal 1: Improvement and maintenance of the existing housing stock while preserving affordability.	**Consistent.** The Project would replace the 228-space mobile home park with 833 residential units and 380 townhomes. Thus, the Project would improve the existing housing stock through introducing more housing opportunities to the Project site. While the Project would relocate existing mobile home spaces, the Project would maintain the site as housing and add 10,352 square feet of café and restaurant uses. The increase of housing supply to the site and mix of housing types would aid the City in preserving affordability throughout the City. Additionally, the IASP would include an Inclusionary Housing requirement. This requirement would require that at least ten percent (10%) of the total units proposed within the Project be restricted multifamily units rented to and occupied by Low-Income, Moderate-Income, and Workforce-Income households. This may be satisfied by providing the Inclusionary Units on-site, on a different site located anywhere within the City limits, or by paying an in-lieu affordable housing fee to the City's affordable housing trust fund. This requirement would further assist the City in providing affordable housing within the City.
Policy 1.3: Promote economic well being of the City by encouraging the development and diversification of its economic base.	**Consistent.** The Project would involve the redevelopment of the Project site with a use that would introduce new residents to the City, thereby expanding the number of consumers in the City, and would provide new economic opportunities through the development of café and restaurant uses on site.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Policy 1.4: Ensure that housing meets all applicable code requirements, without imposing unnecessary costs.	**Consistent.** All future development within the Project site will be subject to compliance with the existing regulations specified in the IASP, which will be reviewed by City staff, and the California Fire Code, which will be reviewed by County of Los Angeles Fire Department (LACFD) for adequate access. Further, the Project would undergo review by both the City's Planning Commission and City Council to ensure applicable code requirements within the City are met.
Policy 1.5: Establish and maintain development standards that support housing development while protecting the quality of life.	**Consistent.** The IASP includes development standards and design guidelines, which detail the requirements that would facilitate the orderly development of the Project site and also require common and private open spaces for residential uses. The Project proposes four residential buildings and townhome units that include intervening green space to provide community connectivity and an enhanced quality of life.
Goal 2: Maintenance and enhancement of neighborhood quality.	**Consistent.** The IASP contains development regulations and an urban design chapter that would facilitate high quality and orderly development of the Project site.
Policy 2.1: Develop safeguards against noise and pollution to enhance neighborhood quality.	**Consistent.** The IASP requires review and approval of a noise attenuation plan by the Director of Community Development. The plan would include features such as interior insulation, exterior insulating panels/materials, and other insulating design features. As discussed in Section 4.6, Greenhouse Gas Emissions, the Project would incorporate sustainability features in compliance with existing regulations that would reduce emission levels. Additionally, the Project's location in proximity to uses that can be accessed via transit would reduce VMT. Further, the Project would implement TDM measures, thereby improving air quality for all residents of the region.
Policy 2.2: Assure residential safety and security.	**Consistent.** The Project would provide safety to the surrounding community through providing compatible residential uses in relation to other residential and neighborhood commercial uses. Introduction of residential buildings to the Project site would not pose safety risks to the surrounding neighbors, such as through public health hazards, excessive mechanical noise, and/or pedestrian/bicyclist safety.
Policy 2.3: Improve housing and assistance of low and moderate income persons and families to obtain homeownership.	**Consistent.** Through increasing the housing opportunities on-site from 228-mobile home spaces to 833 multifamily residential units and 380 townhomes, the Project would increase access to housing in the City. Additionally, the IASP would include an Inclusionary Housing requirement. This requirement would require that at least 10% of the total units proposed within the Project be restricted multifamily units rented to and occupied by Low-Income, Moderate-Income, and Workforce-Income households. This may be satisfied by providing the Inclusionary Units on-site, on a different site located anywhere within the city limits, or by paying an in-lieu affordable housing fee to the City's affordable housing trust fund. This requirement would further assist the City in providing affordable housing within the City.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Policy 2.4: Encourage community involvement in addressing the maintenance and improvement of housing stock and neighborhood context.	**Consistent.** As discussed in Section 3.8, Discretionary Action (see Chapter 3, Project Description), the Project requires a General Plan Amendment and Zone Text/Map Amendment. As part of the Article IX, Part 6 of the City's Municipal Code, such change requires public hearings to allow for community involvement with the Project. Additionally, the Draft EIR will be circulated for public review to allow another opportunity for community involvement.
Policy 2.7: Require excellence in the design of housing through the use of materials and colors, building treatments, landscaping, open space, parking, environmentally sensitive and sustainable building design.	**Consistent.** The Project would construct townhomes and four new multifamily residential buildings in compliance with the design guidelines of the IASP. The aesthetic design goal of the proposed Project is to provide a form, proportion, and articulation that relates to similar architectural approaches throughout the urban areas of the City and maintains a clean and streamlined composition conveyed in a contemporary manner. As shown in Figures 3-6a through 3-6b, Architectural Elevations, in Chapter 3, the Project includes a contemporary style with architectural projections (i.e., balcony and signage) to provide visual interest and an attractive streetscape along Avalon Boulevard. Additionally, the Project would include intervening green spaces throughout the development. The plant palette would incorporate the use of small shrubs, grasses, evergreen trees, accent/flowered trees, and palms along the interior and exterior.
Goal 3: The City shall seek to provide an adequate supply of housing for all economic segments of the City.	**Consistent.** The Project would introduce 833 multifamily dwelling units and 380 townhome residential units. The Project would contribute to an increased supply of housing types within the City by introducing new types in an area predominantly surrounded by single-family dwelling units. Additionally, 180 of the multifamily dwelling units would be age-restricted senior independent living units, which would help meet the needs of the elderly in the City. The Project would not prohibit the City from including more housing types of a wider range of economic levels and age groups than those offered by the Project. Additionally, the IASP would include an Inclusionary Housing requirement. This requirement would require that at least 10% of the total units proposed within the Project be restricted multifamily units rented to and occupied by Low-Income, Moderate-Income, and Workforce-Income households. This may be satisfied by providing the Inclusionary Units on-site, on a different site located anywhere within the city limits, or by paying an in-lieu affordable housing fee to the City's affordable housing trust fund. This requirement would further assist the City in providing affordable housing within the City.
Policy 3.1: Facilitate and encourage diversity in types, prices, ownership, and size of single-family homes, apartments, townhomes, mixed-use housing, transit-oriented development, and live-work housing	
Policy 3.3: Facilitate a mix of affordability levels in residential projects and dispersal of such units to achieve greater integration of affordable housing throughout the community	
Policy 3.4: Promote the availability of housing which meets the special needs of the elderly, homeless, persons with disabilities and large families.	
Policy 3.6: Promote the development of multifamily housing.	**Consistent.** All 1,213 of the Project's units would be multifamily housing units as defined by Section 9191.206 of the Municipal Code (i.e., a dwelling containing two or more dwelling units).
Policy 3.7: Encourage residential development along transit corridors and in close proximity to employment, transportation and activity centers.	**Consistent.** The Project site is located near I-405 and is in an area surrounded by commercial and residential uses and is in close proximity to the employment centers. Additionally, the Project site is served by a number of transit providers to connect residential uses to commercial and employment opportunities.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Policy 6.7: Continue to work toward increasing and stabilizing the number of owner-occupied units within condominiums and planned unit development.	**Consistent.** The Project would provide new opportunity for the owner-occupied units within the Project's townhome units.
Goal H-7: Conservation of natural resources and reduction of energy consumption in all areas of residential development.	**Consistent.** The IASP would incorporate energy efficiency design features in compliance with Title 24 and CALGreen standards that are consistent with the City's Climate Action Plan efficiency measures.
Policy H-7.2: Promote the use of alternative energy sources.	
Policy 7.4: Promote transit-oriented development	**Consistent.** The Project area is served by the Carson Circuit local bus system and is planned to be served by new Long Beach Transit bus routes, which provides connectivity to multiple regional transit lines, including the Torrance Transit System, Gardena Municipal Bus System, Long Beach Transit System, and Los Angeles County Metropolitan Transportation Authority (LA Metro) System. Within the immediate area of the Project site, bus stops are currently located on the northeast and southwest corners of the intersection of Avalon Boulevard and 213th Street and at the intersection of Avalon Boulevard and Carson Street. See Chapter 4.13, Transportation, for further details.
Safety Element	
Goal SAF-1: Minimize the risk of injury, loss of life, and property damage caused by earthquake hazards.	**Consistent.** As discussed in Section 4.5, Geology and Soils, all future development within the Project area would be subject to compliance with the existing regulations specified in Title 24 and relevant City codes related to seismic standards, which includes seismic design criteria.
Policy SAF-1.1: Continue to require all new development to comply with the most recent City Building Code seismic design standards.	
Goal SAF-2: Strive to minimize injury and loss of life, damage to public and private property and infrastructure, and economic and social disruption caused by flood hazards	**Consistent.** As discussed in Section 4.8, Hydrology and Water Quality, the proposed on-site stormwater conveyance system would prevent on-site flooding, and the Project would reduce the amount of stormwater flows leaving the Project site. Additionally, the Project site is in a FEMA Flood Zone X, which is an area with a low risk of flooding, with reduced flood risk due to the levee nearby.
Policy SAF-2.1: Continue to maintain and improve levels of storm drainage service.	**Consistent.** The Project's stormwater flows would continue to drain into the 75-inch County Flood Control District storm drain that runs through the middle of the Project site. The Project's compliance with existing LID requirements would create reductions in the stormwater flows to the City's stormwater system.
Policy SAF-2.4: As development intensifies and/or as redevelopment occurs in the City, ensure that storm drain systems are adequate to accommodate any intensification of uses, as well as existing uses.	**Consistent.** As discussed in Section 4.14, Utilities and Service Systems, the Project would involve improvements to the storm drain system to accommodate the Project.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Policy SAF-3.1: Continue to ensure that each development or neighborhood in the City has adequate emergency ingress and egress.	**Consistent.** All future development within the Project site will be subject to compliance with the existing regulations specified in the California Fire Code and will be reviewed by LACFD for adequate access.
Goal SAF-4: Minimize the threat to the public health and safety and to the environment posed by a release of hazardous materials.	**Consistent.** As discussed in Section 4.7, Hazards and Hazardous Materials, the Project site would result in less than significant impacts related to the release of hazardous materials. As further discussed, the Project would construct residential and some commercial uses, which would not utilize hazardous materials which could pose a threat to public health and safety. Additionally, as outlined in PDF-HAZ-1, the Project applicant shall prepare a Soil Management Plan that is submitted and approved by the Los Angeles County Health Hazardous Materials Division to ensure any potential contamination on site is mitigated.
Goal SAF-5: Minimize the public hazard from fire emergencies.	**Consistent.** All future development within the Project area will be subject to compliance with the existing regulations specified in the California Fire Code and will be reviewed by LACFD for adequate access and fire water provisions.
Policy SAF-5.1: Coordinate with the Fire Department to provide fire and paramedic service at standard levels of service.	
Policy SAF-5.2: Continue to involve the Fire Department in reviewing and making recommendations on projects during the environmental, site planning and building plan review processes.	**Consistent.** All implementing development projects within the Project site will be subject to fire and life safety requirements addressed through building fire plan check by LACFD.
Policy SAF-5.5: Continue to enforce current regulations which relate to safety from fire, particularly in critical and high occupancy facilities.	
Goal SAF-6: Strive to provide a safe place to live, work and play for Carson residents and visitors.	**Consistent.** The Project would address urban sprawl through developing high-density residential uses within an infill project site in close proximity to commercial uses and transit. Additionally, the Project addresses neighborhood safety through providing compatible residential uses in relation to other residential and neighborhood commercial uses. Introduction of residential buildings to the Project site would not pose safety risks to the surrounding neighbors, such as through public health hazards, excessive mechanical noise, and/or pedestrian/bicyclist safety. Additionally, the Project site has interior surface parking and exterior landscaping to promote pedestrian access around the site.
Policy: SAF-6.1: Coordinate with the Sheriff's Department to provide sheriff service at standard levels of service.	**Consistent.** The Project proposes land uses that are consistent with the anticipated uses in the area and are not anticipated to result in substantial increases in demand for police services. As discussed in Section 4.12, Public Services and Recreation, the Project would have a less-than-significant impact on police services.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Noise Element	
Goal N-2: Minimize noise impacts on residential uses and noise sensitive receptors along the City's streets, ensuring that the City's interior and exterior noise levels are not exceeded.	**Consistent.** As discussed in Section 4.10, Noise, all future development within the Project area would be subject to and would comply with the City's existing noise regulations to ensure that the City's interior and exterior noise level thresholds are not exceeded. While the Project would result in a significant and unavoidable short-term noise impact, this impact is already accounted for within Section 4.10. Mitigation measures would be included the reduce the severity of this impact to the maximum extent feasible, and thus, the Project would be consistent with the goal of minimizing this noise impact on residential uses and noise sensitive receptors.
Policy N-2.5: Discourage through traffic in residential neighborhoods.	**Consistent.** Project driveways provide access to existing arterial and collector roadways with no access through existing residential neighborhoods. Regional freeway access is provided at the I-405 ramps located immediately north of the Project site, reducing the potential for commuter traffic from the Project site intruding on neighborhoods.
Goal N-4: Minimize noise impacts from the freeway corridors which surround and bisect the City of Carson, ensuring that the City's interior and exterior maximum noise level standards are not exceeded.	**Consistent.** All future development within the Project site will be subject to compliance with the existing regulations specified in Title 24.
Goal N-7: Incorporate noise considerations into land use planning decisions.	**Consistent.** As discussed in Section 4.10, Noise, the noise impacts of the proposed Project have been evaluated. With the exception of a significant and unavoidable short-term construction noise impact, the Project would not result in significant noise impacts to the surrounding community. While the Project would result in a significant and unavoidable short-term noise impact, this impact is already accounted for within Section 4.10. Mitigation measures would be included the reduce the severity of this impact to the maximum extent feasible. The proposed Project has been designed in conformance with applicable regulations, such as Title 24 building standards, and with thoughtful site plan design (i.e., building orientation and materials) to both limit the exposure of future residents of the Project to community noise and limit noise emanating from the Project site.
Policy N-7.1: Incorporate noise considerations into land use planning decisions by establishing acceptable limits of noise for various land uses throughout the community.	
Policy N-7.2: Continue to incorporate noise assessments into the environmental review process, as needed. Said assessments shall identify potential noise sources, potential noise impacts, and appropriate sound attenuation. In non-residential projects, potential noise sources shall include truck pick-up and loading areas, locations of mechanical and electrical equipment, and similar noise sources. Require mitigation of all significant noise impacts as a condition of project approval.	
Policy N-7.3: Require all new residential construction in areas with an exterior noise level greater than 65dBA CNEL to include sound attenuation measures that reduce interior noise levels to the standards	

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
shown in Table N-3. Sound attenuation measures include: • Sound walls, • Double glazing, • Building location, and/or • Facade treatment.	
Goal N-8: Minimize noise impacts associated with residential uses in mixed-use development.	
Policy N-8.1: Require the design of mixed-use structures to incorporate techniques to prevent transfer of noise and vibration from the commercial to the residential uses.	
Policy N-8.2: Encourage commercial uses in mixed-use developments which are not noise intensive.	**Consistent.** Proposed commercial within the Project site includes neighborhood serving café and restaurant uses. Commercial uses would be regulated by the operating hours that are conducive to their location and adjacent residential sensitive receptors.
Open Space and Conservation Element	
Policy OSC-1.2: Maintain existing landscaping along the City's major streets and expand the landscaping program along other arterial streets throughout the community.	**Consistent.** The Project would incorporate the use of small shrubs, grasses, evergreen trees, accent/flowered trees, and palms along Avalon Boulevard. Additionally, as shown in Figures 3-6a through 3-6d, Architectural Elevations, in Chapter 3, the Project includes a contemporary style with architectural projections (i.e., balcony and signage) to provide visual interest and an attractive streetscape along Avalon Boulevard.
Policy OSC-1.3: Require that adequate, usable and permanent private open space is provided in residential developments.	**Consistent.** As shown in Figure 3-5, Conceptual Site Plan, in Chapter 3, open space amenities within the Project site include courtyards within all multifamily buildings, a Central Park near Building B, and a Greenbelt near the Lot E community center. The IASP would provide development regulations which detail requirements for common and private open space for residential uses.
Goal OSC-2: Protection and conservation of Carson's water resources.	**Consistent.** The Project proposes to incorporate efficiency measures related to water use and wastewater systems in compliance with Title 24 and CALGreen standards. The Project would incorporate elements of the Los Angeles Department of Water and Power LID strategies and would use low water-usage landscaping. The landscape would be designed with predominantly drought tolerant species.
Policy OSC-2.1: Maintain and improve water quality.	**Consistent.** As discussed in Section 4.8, Hydrology and Water Quality, the Project would incorporate elements of the Los Angeles Department of Water and Power LID strategies. In addition, a Water Quality Management Plan (WQMP) has been prepared for the Project and relevant best management practices (BMPs) related to water quality will be incorporated into implementing projects as they are constructed.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Policy OSC-2.2: Continue to monitor land uses discharging into water sources and water recharge areas, to prevent potential contamination from hazardous or toxic substances.	**Consistent**. As discussed in Section 4.8, Hydrology and Water Quality, a WQMP has been prepared for the Project and relevant BMPs related to water quality will be incorporated into implementing projects as they are constructed. Additionally, the National Pollutant Discharge Elimination System Permit (NPDES) would prevent potential contamination from discharging into water sources.
Policy OSC-2.2: Minimize soil erosion and siltation from construction activities through monitoring and regulation.	**Consistent.** All future development within the Project site will be subject to compliance with standard erosion control requirements during grading and construction activities.
Policy OSC-2.6: Encourage the use of reclaimed water in applications for which potable water is not necessary.	**Consistent.** The IASP would incorporate elements of the Los Angeles Department of Water and Power LID strategies. As discussed in Section 4.14, Utilities and Service Systems, the Project's impacts to water supply would be less than significant.
Policy OSC-3.2: Support the development of alternative sources of energy such as roof-mounted solar panels, fuel cells or new technology.	**Consistent.** All future development within the Project site will be subject to compliance with the regulations related to solar panels and electric vehicle charging stations specified in Title 24 and CALGreen.
Policy OSC-3.4: Support energy conservation via alternative forms of transportation.	**Consistent.** The Project area is served by the Carson Circuit local bus system and planned future Long Beach Transit routes, which provides connectivity to multiple regional transit lines, including the Torrance Transit System, Gardena Municipal Bus System, Long Beach Transit System, and Los Angeles County Metropolitan Transportation Authority (LA Metro) System. Within the immediate area of the Project site, bus stops are currently located on the northeast and southwest corners of the intersection of Avalon Boulevard and 213th Street and at the intersection of Avalon Boulevard and Carson Street. Thus, the Project's proximity to alternative forms of transportation would support energy conservation.
Goal OSC-4: Minimize solid waste generated within Carson.	**Consistent.** As discussed in Section, 4.14, Utilities and Service Systems, the amount of solid waste requiring disposal would be reduced through compliance with CALGreen standards.
Policy OSC-4.1: Reduce the generation of solid waste from sources in the City in accordance with the Source Reduction and Recycling Element for Carson (separate from this General Plan) and state regulations	
Parks and Recreation Element	
Goal P-1: Increase of and improvements to park, recreational and cultural facilities to meet the needs of existing and future residents and workers in the City.	**Consistent.** The Project would provide numerous opportunities for passive and active recreation on site, including common open space such as courtyards and paseos, common resident amenities such as a swimming pool and recreational room, and a publicly accessible central park and dog park. Additionally, the proposed pedestrian bridge would provide access to the proposed District at South Bay 2021 project.
Goal P-9: Protection of historic resources within the City.	**Consistent.** As discussed in Section 4.3, Cultural Resources, the Project would not result in any impacts to historical resources.

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
Policy P-10.3: Advocate for more senior housing and better transportation options.	**Consistent.** While this is primarily a City-level policy to be implemented by the City, the Project will include age-restricted senior units. Additionally, the Project would be located within an area that is supported by multiple transportation options, including public transportation routes, pedestrian facilities, and bicycle facilities.
Air Quality Element	
Goal AQ-1: Reduced particulate emissions from paved and unpaved surfaces and during building construction.	**Consistent.** As discussed in Chapter 4.2, Air Quality, development of the Project area would follow South Coast Air Quality Management District (SCAQMD) Rules 402 and 403 (prohibition of nuisances, watering of inactive and perimeter areas, track out requirements, etc.), which reduce particulate emissions from paved and unpaved surfaces and during building construction.
Policy: AQ-1.1: Continue to enforce ordinances which address dust generation and mandate the use of dust control measures to minimize this nuisance.	**Consistent.** As discussed in Chapter 4.2, Air Quality, development of the Specific Plan area would follow SCAQMD Rules 402 and 403 (prohibition of nuisances, watering of inactive and perimeter areas, track out requirements, etc.), which reduce particulate emissions from paved and unpaved surfaces and during building construction.
Goal AQ-2: Air quality which meets State and Federal Standards	**Consistent.** As discussed in Section 4.2, Air Quality, Project construction and operational emissions would be below SCAQMD's thresholds.
Policy AQ-2.2: Utilize incentives, regulations and implement the Transportation Demand Management requirements in cooperation with other jurisdictions to eliminate vehicle trips which would otherwise be made and to reduce vehicle miles traveled for automobile trips which still need to be made.	**Consistent.** The Project would include TDM measures to reduce single-occupant vehicle use (further describe in Appendix I, Local Transportation Assessment). Measures include mix of complementary land uses, senior housing shuttle, unbundled parking, car sharing program, and workstation area.
Policy AQ-2.4: Continue to work to relieve congestion on major arterials and thereby reduce emissions	**Consistent.** The Project would support the use of the existing and proposed pedestrian, bicycle, and mass-transit infrastructure and connectivity. Less reliance on automobiles and support for multi-modal transportation would help reduce greenhouse gas emissions and improve air quality. Development of the Project as a high-density housing within 0.5 miles of commercial uses on Carson Street, and new uses proposed in the surrounding area would assist the City in reducing its contribution to congestion and thereby reduce emissions.
Policy AQ-2.5: Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.	**Consistent.** The Project would improve the existing sidewalk along Avalon Boulevard through introduction of new exterior landscaping, which would improve the overall pedestrian experience. Additionally, the Project would not prevent the City from undertaking additional improvements to adjacent sidewalks and bicycle paths.
Policy AQ-2.6: Encourage in-fill development near activity centers and along transportation routes.	**Consistent.** The Project would develop high-density residential uses within an infill project site close to commercial uses and transit options. The Project area is served by the Carson Circuit

Table 4.9-3. Project's Consistency with Applicable City of Carson General Plan Policies

General Plan Goal or Policy	Project Applicable Component(s)
	local bus system and is planned to be served by new Long Beach Transit bus routes, which provides connectivity to multiple regional transit lines, including the Torrance Transit System, Gardena Municipal Bus System, Long Beach Transit System, and LA Metro System. Within the immediate area of the Project site, bus stops are currently located on the northeast and southwest corners of the intersection of Avalon Boulevard and 213th Street and at the intersection of Avalon Boulevard and Carson Street. Additionally, these residential units would be located in the City, which is considered "jobs-rich" and requires greater housing units. The provision of residential units close to an employment center, the City, and existing commercial amenities, would reduce overall greenhouse gas emissions associated with vehicle trips.
Policy AQ-2.7: Reduce air pollutant emissions by mitigating air quality impacts associated with development projects to the greatest extent possible.	**Consistent.** As discussed in Section 4.2, Air Quality, Project air quality impacts would be less than significant, and no mitigation is required.
Goal AQ-3: Increased use of alternate fuel vehicles.	**Consistent.** All future development within the Project site will be subject to compliance with the regulations related to electric vehicle charging stations specified in Title 24 and CALGreen.

Source for General Plan Goals and Policies: City of Carson 2004.

City of Carson Municipal Code

Article IX, Planning and Zoning, of the City's Municipal Code, in conformance with the General Plan, regulates land use development in the City. In each zone, the zoning regulations specify the permitted and prohibited uses, and the development standards, including setbacks, height, parking, and design standards, among others.

Currently, the Project site is zoned Commercial, Automotive (east), and Residential, Multi-family, up to eight units per acre, with design overlay (RM-8-D) (west). Per the Municipal code, the Commercial, Automotive zone was created primarily to maximize and group retail sales of new automobiles at dealerships and promote the development of an auto sales district with consistent and appealing landscaping, lighting, signage and compatible architectural elements. The Residential, Multi-family, up to eight units per acre zone was created for the establishment, expansion and preservation of residential areas which are to be developed with multiple dwellings or combinations of single-family and multiple dwellings, and such other activities considered harmonious with such medium and high density residential development. Under these existing conditions, the portion of the mobile home park that is located within the Commercial, Automotive zone operates as a non-conforming use as residential uses are not permitted within the Commercial, Automotive zone.

The Project involves a zoning amendment that would change the Project site's zoning from Commercial, Automotive (east), and RM-8-D zone (west) to "XX – Imperial Avalon Specific Plan" or "SP-XX" (Figure 3-4, Existing and Proposed Zoning, in Chapter 3). Approval of the proposed Project, in accordance with the provisions outlined in Article IX, Planning and Zoning, of the Municipal Code and State law, would ensure compliance with applicable zoning standards. Additionally, through the application process, City staff has reviewed the proposed development and determined that it would be in conformance with the proposed IASP.

Specific Plan

When a specific plan is adopted in accordance with the procedure outlined above, the specific plan may effectively supersede portions or all of the current zoning regulations for specified parcels or plan area, and becomes an independent set of zoning regulations that provide specific direction to the type and intensity of uses permitted, and may define other types of design and permitting criteria. The proposed IASP would be adopted by ordinance and would function as the primary zoning document for the IASP area. Where the IASP is silent, the relevant sections and requirements of the zoning regulations shall apply. As described in Section 4.9.2 under "Proposed Imperial Avalon Specific Plan," the development standards would be regulated by the IASP and administered and enforced by the City in accordance with the Municipal Code. The IASP supersedes any conflicts with Municipal Code zoning regulations. Therefore, upon approval of the proposed Project, the Project would be consistent with the Municipal Code for the purposes of avoiding or mitigating environmental effect.

As detailed within Chapter 3, Project Description, of this Draft EIR, the Project includes the adoption of IASP. Implementation of the IASP would serve as a zoning amendment to the City's zoning code. Approval of a specific plan supplements relevant controls in the Municipal Code and General Plan by adding regulations specifically applicable to the site.

In accordance with State law (California Government Code Sections 65450 through 65457), a specific plan may be utilized for the systematic implementation of a City's General Plan. The IASP will be prepared, submitted, and approved in a manner consistent with California Government Section 65451, as well as the City's Municipal Code. The IASP would be adopted by ordinance and would serve as the zoning for the IASP area. The approved IASP area would be designated on the City's Zoning Map as "XX – Imperial Avalon Specific Plan" or "SP-XX"[2]. The land use and development standards identified in this IASP document would supersede all zoning regulations to the extent that they would be in conflict with the sections of this IASP. Whenever the provisions contained in the IASP conflict with the Municipal or Zoning Codes, the provisions of the adopted IASP would take precedence. All future development within the Project site would be subject to these regulations, and each future implementing project would be required to undergo site plan review to ensure that each development is consistent with the scope of the Project discussed within this Draft EIR. As part of the processing of this Project, City staff will conduct a Site Plan Review of the proposed development to determine if it would be in conformance with the proposed IASP. With adoption of the IASP in accordance with State law and the City's Municipal Code, the Project would be compatible with the existing zoning regulations of the City. As such, the Project would not conflict with the Carson Municipal Code.

Conclusion

Based on the analysis provided above, the Project would be consistent with the SCAG 2020–2045 RTP/SCS, the General Plan, and the Carson Municipal Code. The IASP proposes to implement development standards and regulations to create a mix of residential and neighborhood-serving commercial land uses that would be consistent with the General Plan's proposed Urban Residential land use designation. The IASP would promote the transformation of the Project site into a mixed-use development. The mix of land uses within the Project site, including multifamily residential and commercial uses, would reduce automobile trips by creating a pedestrian-oriented, multi-modal environment. Thus, the proposed Project would not conflict with any applicable land use plan,

[2] A numeric designation would be provided upon Project approval.

policy, or regulation of an agency with jurisdiction over the Project site adopted for the purpose of avoiding or mitigating an environmental effect, and impacts would be **less than significant**.

Would the Project have cumulatively considerable impact with regards to land use or planning?

Less-than-Significant Impact. The cumulative analysis considers 25 related projects identified in Appendix I, Local Transportation Assessment, including projects within the City, the City of Torrance, and unincorporated Los Angeles County. Cumulative land use impacts could occur if any of the related projects would result in incompatible land uses, or result in land uses that are inconsistent with adopted land use plans when combined with the impacts of the Project. Given the built-out conditions of the greater Los Angeles Metropolitan region, including the Project site, cumulative development would likely convert existing underutilized properties in the Project site's area to revitalized higher-density developments to respond to the need for housing. The Project would replace a low-density property with a higher-density residential use in a jurisdiction as identified as having a need for residential units (i.e., per the RHNA process). Furthermore, by providing additional housing in close proximity to transit and employment opportunities, the Project would assist the City in achieving short- and long-term planning goals and objectives related to efficiently using existing infrastructure, reducing regional congestion, and improving air quality through the reduction of vehicle miles traveled. This is consistent with SCAG and other regional policies for promoting more intense land uses adjacent in areas with available transit opportunities.

Generally, land use conflicts would be related to noise, traffic, air quality, and hazards/human health and safety issues, which are discussed in the relevant sections of the Draft EIR. Land use conflicts are also typically site-specific and not cumulative in nature; in other words, despite the number of cumulative projects in a given area, they would not necessarily compound to create cumulative land use conflicts. Cumulative incompatibility issues associated with surrounding developments or projects are anticipated to be addressed and mitigated for on a project-by-project basis. In addition, the cumulative environmental effects associated with implementation of the IASP have been addressed in the technical sections of this Draft EIR.

Further, all related projects in the City, City of Torrance, and unincorporated Los Angeles County would be subject to applicable zoning and land use designations and environmental review that would address potential cumulative conflicts. Therefore, cumulative impacts related to land use and planning would be **less than significant**.

4.9.5 Mitigation Measures

No mitigation measures are required.

4.9.6 Level of Significance After Mitigation

Impacts would be **less than significant**.

4.9.7 References

City of Carson. 2004. *City of Carson General Plan*. Adopted October 11, 2004. As amended. http://ci.carson.ca.us/content/files/pdfs/planning/CityofCarsonGeneralPlan.pdf.

City of Carson. 2014. *City of Carson 2014–2021 Housing Element*. Prepared by ESA. Adopted 2014. http://ci.carson.ca.us/content/files/pdfs/planning/generalplan/Chapter%205_Housing.pdf.

City of Carson. 2015. City of Carson General Plan –Land Use [map]. Scale not given. Printed August 5, 2015. Accessed January 2022. http://ci.carson.ca.us/content/files/pdfs/GIS/mapgallery /GeneralPlan24x36.pdf.

City of Carson. 2021a. Draft General Plan Land Use Map. Updated June 1, 2021.

City of Carson. 2021b. Draft General Plan Land Use Classifications. Updated February 25, 2021. https://static1.squarespace.com/static/5991f4e96a4963f2e46af74d/t/604fb71ffd4fdd13b71c652c /1615836960222/Carson+Land+Use+Classifications_02-25-2021-clean.pdf.

HCD (California Department of Housing and Community Development). 2020."Housing Elements." Last Updated September 24,2020. Accessed October 20, 2020. https://www.hcd.ca.gov/community-development /housing-element/index.shtml.

HR&A Advisors. 2017. Multifamily Residential Demand Analysis. Revised September 28, 2017. https://static1.squarespace.com/static/5991f4e96a4963f2e46af74d/t/59fa27e2ec212d5a44c28293 /1509566435259/Carson+Multifamily+Demand+Memo+9.28.17.pdf.

SCAG (Southern California Association of Governments). 2012. 5th Cycle Regional Housing Needs Assessment Final Allocation Plan, 1/1/2014–10/1/2021. Adopted October 4, 2021. http://www.scag.ca.gov /Documents/5thCyclePFinalRHNAplan.pdf.

SCAG. 2016. 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy. Adopted April 2016. https://scag.ca.gov/sites/main/files/file-attachments/f2016rtpscs.pdf?1606005557.

SCAG. 2019. Regional Housing Needs Assessment [RHNA] Fact Sheet. 2019. https://scag.ca.gov/sites /main/files/file-attachments/rhna-2019factsheet.pdf.

SCAG. 2020. 2016. 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy. Adopted May 7, 2020. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176.

SCAG. 2021. SCAG 6th Cycle Final RHNA Allocation Plan. Adopted March 22, 2021. Updated July 1, 2021. https://scag.ca.gov/sites/main/files/file-attachments/6th-cycle-rhna-final-allocation-plan.pdf?1625161899.

4.10 Noise

This section describes the existing noise conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project).

Information contained in this section is based on Appendix J, Acoustical Assessment, prepared by Michael Baker International on December 14, 2021. Other sources consulted are listed in Section 4.10.7, References Cited.

4.10.1 Existing Conditions

This section describes the existing conditions in the Project area and also identifies the resources that could be affected by the Project.

Existing Noise Setting

Existing Noise Levels

To assess the potential for mobile source noise impacts, it is necessary to determine existing noise levels generated by vehicles traveling through the Project area. Vehicle traffic along Interstate (I) 405, Avalon Boulevard, Main Street, Del Amo Boulevard, 213th Street, and Carson Street currently generate the majority of existing outdoor ambient noise in the immediate Project vicinity.

Regional Mobile Sources

The Project is near I-405, a regionally significant Interstate. According to the California Department of Transportation (Caltrans) Traffic Census Program, the I-405 segment closest to the Project site (Carson Junction Route 110), experienced between 272,000 to 274,000 average daily traffic (ADT) during 2018, the most recent year of data (Caltrans 2020b).

Local Mobile Sources

Mobile source noise was modeled using the Federal Highway Administration's Highway Noise Prediction Model (FHWA RD-77-108). The model calculates the average noise level at specific locations based on traffic volumes, average speeds represented by the posted speed limit, roadway geometry, and site environmental conditions. The model does not account for ambient noise levels. Noise projections are based on modeled vehicular traffic as derived from The Imperial Avalon Project Average Daily Trip Segment Volumes (ADT Volumes) excel sheet (Fehr & Peers 2021). Modeling assumptions and vehicle speeds along the roadway segments are discussed in further detail in Appendix J. Existing modeled traffic noise levels are provided in Table 4.10-1, which shows existing mobile noise sources in the vicinity of the site range from 49.3 to 74.0 A-weighted decibels (dBA) Community Noise Equivalent Level (CNEL) at 50 feet from roadway centerline.

Table 4.10-1. Existing Traffic Noise Levels

Roadway Segment	Existing Land Uses Located along Roadway Segment	CNEL at 50 Feet from Roadway Centerline (dBA)	Land Use Compatibility[1]
Avalon Boulevard			
Albertoni Street to Victoria Street	Residential	70.1	NU
Victoria Street to M.L.K. Jr. Street	Residential, Outdoor Spectator Sports, Commercial, Neighborhood Parks	72.8	NU
M.L.K. Jr. Street to Del Amo Boulevard	Residential, Golf Course, Commercial	74.0	NU
Del Amo Boulevard to I-405	Commercial	71.2	NA
I-405 to Imperial Avalon Main Entrance	Residential, Commercial	70.5	NU
Imperial Avalon Main Entrance to 213th Street	Residential, Commercial	70.6	NU
213th Street to Carson Street	Residential, Business Professional, Commercial	69.7	CA
Carson Street to 220th Street	Residential, Commercial	70.4	NU
Grace Avenue			
North of 213th Street	Residential	49.3	NA
Main Street			
Torrance Boulevard to 213th Street	Residential, Manufacturing, Commercial	70.3	NU
213th Street to Carson Street	Residential, Commercial, Neighborhood Park	70.0	CA
Carson Street to 220th Street	Residential, Church, Commercial	69.8	CA
Del Amo Boulevard			
Avalon Boulevard to Central Avenue	Residential, Utilities, Commercial, Neighborhood Parks	72.2	NU
213th Street			
Grave Avenue to Avalon Boulevard	Residential, Commercial	62.7	CA
Carson Street			
Figueroa Street to Main Street	Residential, Commercial	68.9	CA
Main Street to Grave Avenue	Residential, Commercial	68.6	CA
Grave Avenue to Avalon Boulevard	Residential, Commercial	68.8	CA
Avalon Boulevard to I-405	Residential, Business Professional, Hotel, Commercial	70.7	NU

Source: Noise modeling is based on traffic data within Imperial Avalon Project Average Daily Trip Segment Volumes (ADT Volumes) excel sheet (Fehr & Peers 2021).
Notes: ADT = average daily traffic; dBA = A-weighted decibels; CNEL = Community Noise Equivalent Level.
[1] Land use compatibility:

NA = Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
CA = Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
NU = Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
CU = Clearly Unacceptable – New construction or development should generally not be undertaken.

Stationary Sources

The Project site is located in an urbanized area. The primary sources of stationary noise in the Project vicinity are urban-related activities, including parking areas, people talking, truck deliveries, and dogs barking. The noise associated with these sources may represent a single event or intermittent occurrence, short-duration but sustained sound emission, or continuous noise (e.g., air conditioning).

Noise Measurements

Existing noise levels were measured at the Project site boundaries in order to establish baseline noise conditions against which to compare Project operational noise levels, as shown in Figure 4.10-1, Noise Measurement Locations**.** A total of four short-term noise measurements were taken at potentially sensitive receptors within and immediately adjacent to the Project site; one at the corner of Javelin Street and Grace Avenue, one along Grace Avenue on the southwest end of the Project boundary, one along 213th Street, and one along Avalon Boulevard on the eastern Project boundary. Noise measurements were taken on October 17, 2019, prior to the implementation of recommendations to limit activities to prevent to COVID-19. Refer to Figure 4.10-1 for a graphic depiction of the location of these noise measurements. Table 4.10-2 summarizes the noise measurement locations and the calculated equivalent continuous sound level (L_{eq}), minimum sound level (L_{min}), and maximum sound level (L_{max}).

Table 4.10-2. Existing Noise Measurements

Site	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Time
1	Southwest corner of East Javelin Street and Grace Avenue	55.1	50.1	80.0	9:25 a.m.
2	On Grace Avenue, approximately 435 feet north of East 213th Street	56.7	48.9	68.6	9:41 a.m.
3	213th Street, near western entrance to Kia Carson dealership	65.5	53.6	78.2	9:57 a.m.
4	Along South Avalon Boulevard, approximately 600 feet north of East 213th Street	68.3	61.4	85.3	10:14 a.m.

Source: Appendix J.

As shown in Table 4.10-2, measured daytime noise levels ranged from 55.1 to 68.3 dBA L_{eq}.

Sensitive Receptors

Certain land uses are particularly sensitive to noise, including schools, hospitals, rest homes, long-term medical and mental care facilities, and parks and recreation areas. Residential areas are also considered noise-sensitive, especially during the nighttime hours. Existing sensitive receptors located in the Project vicinity include residential uses, recreational uses, schools, and places of worship. Sensitive receptors are listed in Table 4.10-3, Sensitive Receptors.

Table 4.10-3. Sensitive Receptors

Type	Name	Distance from Project Site (feet)[1]	Direction from Project Site	Location
Residential	Residential Uses	2,721	Northeast	950 East Del Amo Boulevard, Carson, CA 90746
		3,533	North	600 East Turmont Street, Carson, CA 90746
		Adjoining	South	Along East 213th Street
		820	Southeast	802 East 213th Street, Carson, CA 90745
		Adjoining	West	Along Grace Avenue
Schools	Golden Wings Academy Inc.	1,503	North	20715 South Avalon Boulevard, Suite 360, Carson, CA 90746
	Carnegie Middle School	2,248	Southeast	21820 Bonita Street, Carson, CA 90745
	Bonita Street Elementary School	2,711	Southeast	21929 Bonita Street, Carson, CA 90745
	St. Philomena School	3,235	Southwest	21832 South Main Street, Carson, CA 90745
	Carson Street Elementary School	2,337	Southwest	161 East Carson Street, Carson, CA 90745
Places of Worship	Judson Baptist Church	4,086	South	451 East 223rd Street, Carson, CA 90745
	First Christian Church of Carson	3,227	South	356 East 220th Street, Carson, CA 90745
	Bread of Life Christian Center Church	2,486	Northeast	20620 Leapwood Avenue, Suite H, Carson, CA 90746
	Torrance Apostolic Tabernacle	2,687	Southwest	21818 Dolores Street, Carson, CA 90745
	Carson Spanish Sda Church	2,756	Southwest	21828 Dolores Street, Carson, CA 90745
	Harbor Community Church	2,577	Southwest	21739 Dolores Street, Carson, CA 90745
	St. Philomena Church	3,235	Southwest	21900 South Main Street, Carson, CA 90745
	Greater Love Reformed Baptist Church	3,453	West	20926 South Main Street, Carson, CA 90745
	Glory Christian Fellowship Church	4,078	Northwest	225 Torrance Boulevard, Suite D, Carson, CA 90745

Table 4.10-3. Sensitive Receptors

Type	Name	Distance from Project Site (feet)[1]	Direction from Project Site	Location
Recreational	Del Amo Park	3,213	North	703 East Del Amo Boulevard, Carson, CA 90746
	The Links at Victoria Golf Course	3,143	North	340 M.L.K. Jr. Street, Carson, CA 90746
	Perry Street Mini-Park	3,531	Southeast	East 215th Place and South Perry Street, Carson, CA 90745
	Calas Park	3,633	Southeast	1000 East 220th Street, Carson, CA 90745
	Carson Park	2,112	West	21411 Orrick Avenue, Carson, CA 90745

Source: Appendix J.

[1] Distances are measured from the exterior Project boundary only and not from individual construction areas within the interior of the Project site.

Description of Noise Metrics

Standard Unit of Measurement

Sound is described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by differentiating among frequencies in a manner approximating the sensitivity of the human ear.

Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dBA higher than another is perceived to be twice as loud and 20 dBA higher is perceived to be four times as loud, and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Table 4.10-4, Noise Descriptors, provides a variety of commonly used acoustical metrics, descriptors, and statistical values.

Table 4.10-4. Noise Descriptors

Term	Definition
Decibel (dB)	The unit for measuring the volume of sound equal to 10 times the logarithm (base 10) of the ratio of the pressure of a measured sound to a reference pressure (20 micropascals).
A-Weighted Decibel (dBA)	A sound measurement scale that adjusts the pressure of individual frequencies according to human sensitivities. The scale accounts for the fact that the region of highest sensitivity for the human ear is between 2,000 and 4,000 cycles per second (hertz).
Equivalent Sound Level (L_{eq})	The sound level containing the same total energy as a time varying signal over a given time period. The L_{eq} is the value that expresses the time averaged total energy of a fluctuating sound level.
Maximum Sound Level (L_{max})	The highest individual sound level (dBA) occurring over a given time period.
Minimum Sound Level (L_{min})	The lowest individual sound level (dBA) occurring over a given time period.

Table 4.10-4. Noise Descriptors

Term	Definition
Community Noise Equivalent Level (CNEL)	A rating of community noise exposure to all sources of sound that differentiates between daytime, evening, and nighttime noise exposure. These adjustments are +5 dBA for the evening, 7:00 p.m. to 10:00 p.m., and +10 dBA for the night, 10:00 p.m. to 7:00 a.m.
Day/Night Average (L_{dn})	The L_{dn} is a measure of the 24-hour average noise level at a given location. It was adopted by the United State Environmental Protection Agency for developing criteria for the evaluation of community noise exposure. It is based on a measure of the average noise level over a given time period called the L_{eq}. The L_{dn} is calculated by averaging the L_{eq}'s for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 p.m. to 7:00 a.m.) by 10 dBA to account for the increased sensitivity of people to noises that occur at night.
Exceedance Level (L_n)	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% (L_{01}, L_{10}, L_{50}, L_{90}, respectively) of the time during the measurement period.

Source: Appendix J.

Potential Health Effects and Annoyance from Noise

Human response to sound is highly individualized. Annoyance is the most common issue regarding community noise. As supported by research from Schultz, the percentage of people claiming to be annoyed by noise generally increases with the environmental sound level. However, many factors also influence people's response to noise. The factors can include the character of the noise, the variability of the sound level, the presence of tones or impulses, and the time of day of the occurrence. Additionally, non-acoustical factors, such as the person's opinion of the noise source, the ability to adapt to the noise, the attitude towards the source and those associated with it, and the predictability of the noise, all influence people's response. As such, response to noise varies widely from one person to another and with any particular noise, individual responses would range from "not annoyed" to "highly annoyed." The reaction to noise can also be highly subjective; the perceived effect of a particular noise can vary widely among individuals in a community.

The effects of noise are often only transitory, but under the right conditions adverse effects can be cumulative with prolonged or repeated exposure. Depending on aforementioned factors and context, the effects of noise on the community can include noise-Induced hearing loss, interference with communication, sleep disturbance, and annoyance. However, noise levels that can cause hearing loss, for which there is established research and associated regulation, such as what the Occupational Safety and Health Administration (OSHA) defines for workplace settings, are quite high and most often much greater than what is typically found in an outdoor ambient sound environment.

Annoyance can be viewed as the expression of negative feelings resulting from interference with activities, as well as the disruption of one's peace of mind and the enjoyment of one's environment. The consequences of noise-induced annoyance are typically privately held dissatisfaction and publicly expressed complaints to authorities. This potential annoyance as a subjective reaction to noise and other contributing factors is sometimes claimed as being related to stress and corresponding indirect health effects, and this correlation as it may pertain to noise remains a topic of ongoing research and study.



SOURCE: Maxar 2021

DUDEK

0 135 270 Feet

FIGURE 4.10-1

Noise Measurement Locations

Imperial Avalon Mixed-Use Project

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4.10.2 Relevant Plans, Policies, and Ordinances

Federal

The following federal guidance pertaining to assessment of community noise effects due to transportation noise sources helps support the Project's adoption of variable impact significance criteria with respect to pre-existing outdoor ambient sound levels.

Federal Interagency Committee on Noise

Originally developed as a set of quantified screening criteria to assess aviation noise exposures to a community relative to its pre-existing outdoor ambient sound environment, the following Federal Interagency Committee on Noise-suggested thresholds have also been used to assess community noise exposures due to surface transportation sources:

- An increase in the outdoor ambient sound level due to the Project of no more than 5 dB, when the existing environment is already at a day-night level (L_{dn}) of 60 dBA or lower
- An increase in the outdoor ambient sound level due to the Project of no more than 3 dB, when the existing environment is already in the L_{dn} range of 60 to 65 dBA
- An increase in the outdoor ambient sound level due to the Project of no more than 1.5 dB, when the existing environment already exceeds an L_{dn} of 65 dBA

State

The following state regulations pertaining to noise would apply to the Project.

California Environmental Quality Act

The Office of Planning and Research's Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL. Table 4.10-5, Land Use Compatibility for Community Noise Environments, presents guidelines for determining acceptable and unacceptable community noise exposure limits for various land use categories. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

Table 4.10-5. Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable	*Conditionally Acceptable*	*Normally Unacceptable*	*Clearly Unacceptable*
Residential – Low Density, Single-Family, Duplex, Mobile Homes	50–60	55–70	70–75	75–85
Residential – Multiple Family	50–65	60–70	70–75	70–85
Transient Lodging – Motel, Hotels	50–65	60–70	70–80	80–85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	80–85

Table 4.10-5. Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable	*Conditionally Acceptable*	*Normally Unacceptable*	*Clearly Unacceptable*
Auditoriums, Concert Halls, Amphitheaters	NA	50–70	NA	65–85
Sports Arenas, Outdoor Spectator Sports	NA	50–75	NA	70–85
Playgrounds, Neighborhood Parks	50–70	NA	67.5–75	72.5–85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–70	NA	70–80	80–85
Office Buildings, Business Commercial and Professional	50–70	67.5–77.5	75–85	NA
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	75–85	NA

Source: OPR 2017.
Notes: NA= Not Applicable; L_{dn}= average day/night sound level; CNEL= Community Noise Equivalent Level; dBA = A-weighted decibel
Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Local

The following local/regional regulations pertaining to noise would apply to the Project.

City of Carson General Plan

The Noise Element of the General Plan provides the following goals and policies potentially relevant to the Project:

Goal N-2: Minimize noise impacts on residential uses and noise sensitive receptors along the City's streets, ensuring that the City's interior and exterior noise levels are not exceeded.

> **Policy N-2-1:** Limit truck traffic to specific routes and designated hours of travel, where necessary, as defined in the Transportation and Infrastructure Element and by the City's Development Services Group. Said routes and hours shall be reviewed periodically to ensure the protection of sensitive receptors and residential neighborhoods.
>
> **Policy N-2-5:** Discourage through traffic in residential neighborhoods.

Goal N-7: Incorporate noise considerations into land use planning decisions.

> **Policy N-7-2:** Continue to incorporate noise assessments into the environmental review process, as needed. Said assessments shall identify potential noise sources, potential noise impacts, and appropriate sound attenuation. In non-residential projects, potential noise sources shall include truck pick-up and loading areas, locations of mechanical and electrical equipment, and similar noise sources. Require mitigation of all significant noise impacts as a condition of project approval.

Policy N-7-3: Require all new residential construction in areas with an exterior noise level greater than 65dBA CNEL to include sound attenuation measures that reduce interior noise levels to the standards shown in Table N-3. Sound attenuation measures include sound walls, double glazing, building location, and/or façade treatments.

Policy N-7-4: Ensure acceptable noise levels near schools, hospitals, convalescent homes, churches, and other noise sensitive areas in accordance with Table N-2. To this end, require buffers or appropriate mitigation of potential noise sources. Such sources include, but are not limited to truck pickup and loading areas, mechanical and electrical equipment, exterior speaker boxes, and public address systems.

Goal N-8: Minimize noise impacts associated with residential uses in mixed use development.

Policy N-8-1: Require the design of mixed use structures to incorporate techniques to prevent transfer of noise and vibration from the commercial to the residential uses.

Policy N-8-2: Encourage commercial uses in mixed use developments which are not noise intensive.

Further, the General Plan includes interior and exterior noise standards as summarized in Table 4.10-6, Interior and Exterior Noise Standards, which specify acceptable limits of noise for various land uses throughout Carson. The City of Carson (City) uses the standards identified in Table 4.10-5 and Table 4.10-6 as the primary tools to ensure compatibility between land uses and outdoor ambient noise.

Table 4.10-6. Interior and Exterior Noise Standards

Type		CNEL	
Categories	*Uses*	*Interior*[1,3]	*Exterior*[2,4]
Residential	Single-Family Duplex, Multiple Family	45–55	50–60
	Mobile Home	45	65
Commercial Industrial Institutional	Hotel, Motel, Transient Lodging	45	—
	Commercial Retail, Bank, Restaurant	55	—
	Office Building, Research and Development, Professional Offices, City Office Building	50	—
	Amphitheater, Concert Hall, Auditorium, Meeting Hall	45	—
	Gymnasium (Multipurpose)	50	—
	Sports Club	55	—
	Manufacturing, Warehousing, Wholesale, Utilities	65	—
	Movie Theater	45	—
Institutional	Hospital, School Classroom	45	65
	Church, Library	45	—
Open Space	Park	—	65

Source: City of Carson 2004.
Notes: CNEL = Community Noise Equivalent Level
1 Indoor environment including bedrooms, living areas, bathrooms, toilets, closets, corridors.
2 Outdoor environment limited to private yard of single family; multi-family private patio or balcony which is served by a mans of exit from inside the dwelling; balconies 6 feet deep or less are exempt; mobile home park; park's picnic area; and school's playground.
3 Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 12, Section 1205 of the Uniform Building Code.
4 Exterior noise levels should be such that interior noise levels do not exceed 45 CNEL.

City of Carson Municipal Code

Chapter 5 of the Carson Municipal Code (Municipal Code) contains noise control regulations. The City adopted the "Los Angeles County Noise Ordinance" as the City's Noise Control Ordinance in 1995. The adopted Noise Ordinance Standards, derived from Los Angeles County Code Section 12.08.390, Exterior Noise Standards, and Section 12.08.400, Interior Noise Standards, establish exterior and interior noise standards to regulate operation intrusive noises within specific land use zones. These noise standards are summarized in Table 4.10-7, Noise Ordinance Standards.

Table 4.10-7. Noise Ordinance Standards

Noise Zone	Land Use (Receptor Property)	Time Interval	Noise Level (dBA)	
			Exterior	Interior
I	Noise Sensitive-Area	Anytime	45	—
II	Residential Properties	10:00 p.m. to 7:00 a.m. (nighttime) 7:00 a.m. to 10:00 p.m. (daytime)	45 50	—
III	Commercial Properties	10:00 p.m. to 7:00 a.m. (nighttime) 7:00 a.m. to 10:00 p.m. (daytime)	55 60	—
IV	Industrial Properties	Anytime	70	—
All Zones	Multi-family	10:00 p.m.–7:00 a.m.	—	40
	Residential	7:00 a.m.–10:00 p.m.	—	45

Source: County of Los Angeles, County of Los Angeles County Code Section 12.08.490 and 12.08.400, November 2001.

Additionally, Municipal Code Section 5502(c), Amendments to Noise Control Ordinance, provides exterior noise standards that regulate construction noise near residential uses. Noise standards for non-scheduled, intermittent, short-term operations (less than 20 days), as well as standards for repetitively scheduled and relatively long-term construction operations (periods of 21 days or more) of equipment are summarized in Table 4.10-8, Maximum Construction Noise Limits.

Table 4.10-8. Maximum Construction Noise Limits

Construction Time		Maximum Allowed Noise Level (dBA)	
		Single-Family Residential	*Multi-Family Residential*
Maximum noise levels for nonscheduled, intermittent, short-term operation of 20 days or less for construction equipment.	Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75	80
	Daily, except 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60	64
Maximum noise level for repetitively scheduled and relatively long-term operation of 21 days or more for construction equipment.	Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	65	70
	Daily, except 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	55	60

Source: City of Carson, Carson Municipal Code, codified through Ordinance 20-2013, passed September 1, 2020.

Further, Municipal Code Section 12.08.570 exempts noise associated with motor vehicles operating on private property and public right-of-way from the noise ordinance.

4.10.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to noise are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to noise would occur if the Project would:

1. 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.
2. Result in generation of excessive groundborne vibration or groundborne noise levels.
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

In light of these significance criteria, and consistent with the Acoustical Assessment (Appendix J), this noise impact assessment uses the following standards to evaluate potential Project-attributed noise impacts:

- Enduring or "permanent" changes in roadway noise to offsite community receptors – Akin to the afore-stated Federal Interagency Committee on Noise criteria, which applies a variable increase-over-ambient or "relative" noise level threshold depending upon the pre-existing outdoor ambient noise level without Project acoustical contribution, a significant impact would occur if the difference in predicted traffic noise levels between the "Future With Project" traffic noise scenario and the "Future Without Project" scenario results in an increase by greater than 5 dBA CNEL at the affected sensitive land use within the "normally acceptable" or "conditionally acceptable" category per Table 4.10-5 (i.e., the City's land use noise compatibility guidelines). An increase in traffic noise of 3 dBA CNEL or more at the affected sensitive land use falling within the "normally unacceptable" or "clearly unacceptable" category would also be considered significant.
- Temporary construction noise – The City, by way of the Municipal Code, has an established set of quantified construction noise level thresholds as appearing in Table 4.10-8 that depend on factors such as the day of the week, time period (i.e., daytime or nighttime), construction activity duration, and the type of residential receptor exposed to construction noise. In addition, this assessment adopts an additional quantified noise threshold that represents a 5 dB increase above the existing outdoor ambient sound level at an offsite receiver. As shown in Table 4.10-2, existing outdoor ambient noise levels in the vicinity of the Project site range from 55.1 dBA to 68.3 dBA; hence, the corresponding construction noise assessment threshold would be 5 dB higher: 60.1 to 73.3 dBA. However, to provide a conservative analysis, the lowest value of this range is conservatively adopted herein to assess construction noise at the nearest offsite sensitive receptors. These offsite sensitive receptors include those along Grace Avenue (both on the east and west sides of Grace Avenue), for which outdoor ambient sound level measurement samples (Site 1 and Site 2 on Table 4.10-2) varied by less than 2 dB.

Because the nearest airport to the Project site is the Compton/Woodley Airport located approximately 3.5 miles to the northeast in the City of Compton, and according to the General Plan, the 60 dBA and 65 dBA noise contours from the Compton/Woodley Airport do not extend into the City of Carson, no workers or proposed residents of the Project site would be expected to experience excessive aviation noise exposures. Additionally, the Project site is not located within the vicinity of a private airstrip or related facilities. For these reasons, no impacts in this regard are anticipated, and this topic is not further discussed herein.

This impact assessment also considers cumulative traffic noise, evaluated with the same relative increase criteria as described previously for the Project. Impacts are assessed by comparing future without-Project noise levels to future with-Project noise levels.

Methodology

The analysis of existing and future noise environments is based on observations, noise level measurements, and computer modeling. Existing noise levels were monitored at selected on-site and off-site locations using ANSI Type 1 sound level meters for general environmental noise measurement instrumentation. Traffic noise modeling involved the calculation of existing and future traffic noise levels along roadway sections where the proposed Project would contribute additional vehicle trips, using the Federal Highway Administration model. Vibration from transportation sources was not evaluated in detail because it is not common for vibration from motor vehicles traveling on paved roads to cause disturbance or substantial annoyance in these areas. Construction noise levels were determined using the Federal Highway Administration Road Construction Noise Model construction noise prediction model. For construction noise, this analysis assumed that compliance with temporal conditions would occur as specified in the City's Noise Ordinance. Specifically, limiting construction to the hours of 7:00 a.m. to 8:00 p.m., daily except Sundays and legal holidays. Groundborne vibration levels associated with construction-related activities for the Project were evaluated utilizing typical groundborne vibration levels associated with construction equipment, obtained from Federal Transit Administration (FTA) published data for construction equipment.

4.10.4 Impacts Analysis

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 Project would result in the generation of short-term construction noise and long-term operational noise. During construction, noise would be generated by heavy machinery and mechanical equipment to construct the Project, as well as by heavy trucks accessing the Project site to deliver and remove construction materials and waste. During operation, noise would be generated by residents and retail customers accessing the Project site, persons using outdoor amenities, the operation of mechanical equipment such as heating, ventilation, and air conditioning (HVAC) equipment, garbage trucks accessing the Project site, and by people using designated parking areas. As discussed in detail below, despite implementation of mitigation measures to reduce the effects of these impacts, impacts associated with short-term construction noise would be significant and unavoidable; impacts associated long-term operational noise would be less than significant.

Short-Term Construction Noise

Significant and Unavoidable Impact. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., grading, paving, building construction). Construction of the proposed Project would generate noise that could expose residential receptors to elevated noise levels that may disrupt communication and routine activities. The closest receptors would be the residences located approximately 5 feet away from construction. However, construction activities would occur throughout the Project site and would not be concentrated at a single point near sensitive receptors. Furthermore, typical operating cycles for construction equipment tend to involve 1–2 minutes of full power, followed by 3–4 minutes at lower power levels—that is, they do not generate sustained maximum noise levels and instead exhibit the effects of what the Federal Highway Administration's Roadway Construction Noise Model calls an "acoustical usage factor" that accounts for this variability of power or load and thus noise emission.

The loudest construction phase would be the grading phase as heavy-duty construction equipment may be used near the closest sensitive receptors (i.e., approximately 5 feet). The estimated grading construction noise levels at the nearest noise-sensitive receptors is presented in Table 4.10-9, Grading Construction Noise Levels at Adjacent Residential Receptors. To present a conservative impact analysis, the estimated noise levels were calculated for a scenario in which all heavy construction equipment were assumed to operate simultaneously and be located at the construction area nearest to the affected receptors.

As depicted in Table 4.10-9, adjacent residential receptors could be exposed to temporary and intermittent noise levels ranging from 70.4 to 114.2 dBA (without mitigation). The noise levels presented in Table 4.10-9 are conservative, as these noise levels assume the simultaneous operation of all heavy construction equipment during the demolition and grading phases at the same precise location. Modeled heavy construction equipment include excavators, dozers, tractors, and crushing equipment during the demolition phase and excavators, graders, loaders, and vibratory drivers during the grading phase. It should also be acknowledged that construction activities would occur during normal daytime hours (between 7:00 a.m. and 8:00 p.m.) to avoid noise disturbances at nearby receptors during the more sensitive hours (between 8:00 p.m. and 7:00 a.m.)

Table 4.10-9. Demolition and Grading Construction Noise Levels at Adjacent Residential Receptors

Phase	Nearest Sensitive Receptor to Project Site	Estimated Exterior Construction Noise Level (dBA L_{eq})[1]	Estimated Exterior Construction Noise Level (dBA L_{eq}) with Mitigation[2]	Construction Noise Threshold (dBA L_{eq})[3]	Exceeds Standards with Mitigation?
Demolition	Southern/Southwestern Residences (approximately 650 feet)	70.4	60.4	60.1	Yes
Grading	Southern/Southwestern Residences (approximately 5 feet)	114.2	104.2	60.1	Yes

Sources: FHA 2006; Appendix J.

1 These noise levels conservatively assume the simultaneous operation of all heavy construction equipment at the same precise location. Modeled heavy construction equipment include excavators, dozers, tractors, and crushing equipment during the demolition phase and excavators, graders, loaders, and vibratory drivers during the grading phase.

2 Project estimated exterior construction noise levels with mitigation include a sound reduction of 10 dBA from MM-NOI-2.

3 The construction noise threshold is based on a change in ambient noise levels of 5 dBA. As shown in Table 4.10-2 ambient noise levels in the vicinity of the Project site range from 55.1 dBA to 68.3 dBA. To provide a conservative analysis, the construction noise threshold is based on the lowest ambient noise level in the Project vicinity (i.e., 55.1 dBA). Therefore, the construction noise threshold is 60.1 dBA.

As shown in Table 4.10-9, construction noise levels during demolition and grading activities would exceed the construction noise threshold of 60.1 dBA, which is 5 dB above the existing outdoor ambient sound level at offsite sensitive receptors. To substantially reduce construction-generated noise at nearby receptors, the proposed Project would be required to implement Mitigation Measure (**MM-)NOI-1** and **MM-NOI-2**. **MM-NOI-1** would include the designation of a "Noise Disturbance Coordinator" and orientation of stationary construction equipment away from nearby sensitive receivers, among other requirements. Further, implementation of **MM- NOI-2** would reduce the Project's construction noise levels by at least 10 dBA with the use of a temporary noise barrier or enclosure along the southern/southwestern portion of the Project site to break the line of sight between the construction equipment and the adjacent residences. As depicted in Table 4.10-9, construction noise levels during the demolition and grading phase, with implementation of **MM-NOI-1** and **MM-NOI-2**, would

be 60.4 dBA and 104.2 dBA, respectively. Therefore, construction noise levels would exceed the construction noise threshold of 60.1 dBA during the demolition and grading phases. No further mitigation measures are feasible. Thus, construction noise impacts would be **significant and unavoidable**.

Construction Truck Trips

Construction activities would also cause increased noise along access routes to and from the Project site due to movement of equipment and workers, as well as hauling trips. As detailed in the Project noise report, construction activities would include demolition of buildings that result in quantities of material hauling trips. Similarly, grading at the Project site would require thousands of cubic yards of imported material that would add the total average daily trip quantity, as would construction worker trips to and from the Project site. As a result, mobile noise sources due to this added Project construction traffic would temporarily increase roadway traffic along access routes to and from the Project site during construction. Of course, mobile traffic noise from Project construction trips would be temporary and would cease upon completion of on-site construction activities.

Reference noise levels from heavy vehicles comparable to a haul truck (i.e., concrete mixer trucks, drill rig trucks, and dump trucks) range from 84 to 85 dBA (presumed L_{max}) at a distance of 50 feet. Sensitive receptors (i.e., residential uses) along Grace Avenue and 213th Street would be located as close as 25 feet from haul truck operations during construction. At this distance, and assuming an idling haul truck or the moment that a haul truck drives past the receptor position, estimated operation noise levels would range from 90 to 91 dBA and under such conditions would exceed the construction noise threshold of 60.1 dBA. If just one haul truck, exhibiting this afore-stated range of reference L_{max} sound level, were to make a 5-second duration pass-by in the proximity of the studied receptor position over a 10-minute period, which is the same as the sampling duration for the L_{eq} values appearing in Table 4.10-2, the sound energy of that truck pass-by would be spread over that period and result in an estimated energy-averaged sound level (L_{eq}) of 64 dBA L_{eq}, which still exceeds the adopted 60.1 dBA L_{eq} standard. More than one truck trip or pass-by occurring within this 10-minute time period would increase the predicted noise level by 3 dB for every doubling of haul truck trips (or comparably noisy vehicles).

Therefore, **MM-NOI-2** and **MM-NOI-3** shall be implemented to reduce haul truck trip noise levels at sensitive receptors. **MM-NOI-2** would reduce the Project's construction noise levels by at least 10 dB with the use of a temporary noise barrier or enclosure along the southern portion of the Project site to break the line of sight between haul truck operations and the adjacent residences. **MM-NOI-3** would route haul truck trips away from sensitive receptors and limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 7:00 a.m. to 8:00 p.m. on weekdays and Saturdays only). Specifically, **MM-NOI-3** would include a haul route exhibit specifying site access for construction hauling trips along Avalon Boulevard. The nearest sensitive receptor would be located along 213th Street at a distance of approximately 520 feet from the closest potential access point for construction hauling trips along Avalon Boulevard. Accounting for **MM-NOI-2** and **MM-NOI-3**, estimated haul truck noise levels would range from 53.7 to 54.7 dBA at the nearest sensitive receptor. Therefore, haul truck noise levels would not exceed the construction noise threshold of 60.1 dBA and impacts would be less than significant with implementation of **MM-NOI-2** and **MM-NOI-3**. Impacts would be **less than significant with mitigation incorporated**.

Long-Term Operational Noise

Roadway Traffic Noise

The proposed Project would result in additional traffic on adjacent roadways from daily activities, thereby increasing vehicular noise in the vicinity of existing and proposed land uses. Based on the Imperial Avalon Local Transportation Assessment (Transportation Assessment; Appendix I), typical daily activities are forecast to generate 5,586 net new average daily trips, including net new 402 trips during the a.m. peak hour and 457 trips during the p.m. peak hour (Appendix I). The calculated traffic noise levels for the "Future Year Without Project" and "Future Year With Project" scenarios are compared in Table 4.10-10, Future (2027) Traffic Noise Levels. As depicted in Table 4.10-10, under the "Future Without Project" scenario, noise levels would range from approximately 49.4 dBA to 75.1 dBA, with the highest noise levels occurring along the Avalon Boulevard segment from M.L.K. Jr. Street to Del Amo Boulevard. The "Future Year With Project" scenario noise levels would range from approximately 52.5 dBA to 75.2 dBA, with the highest noise levels also occurring along the Avalon Boulevard segment from M.L.K. Jr. Street to Del Amo Boulevard.

The Project would have a significant impact if the "Future With Project" prediction scenario exhibits traffic noise levels that are greater than those of the "Future Without Project" scenario traffic noise levels by more than 5 dBA CNEL at the affected sensitive land use within the "normally acceptable" or "conditionally acceptable" category, or an increase of 3 dBA CNEL at the affected sensitive land use within the "normally unacceptable" or "clearly unacceptable" category; therefore, significance threshold values shown in Table 4.10-10 are based on these land-use/noise compatibility categories identified in Table 4.10-5. As depicted in Table 4.10-10, the "Future With Project" traffic noise levels would not exceed the 5.0 dBA or 3.0 dBA Increase Significance Thresholds along any of the surrounding roadways. Therefore, a **less-than-significant** impact would occur in this regard.

Table 4.10-10. Future (2027) Traffic Noise Levels

Roadway Segment	CNEL at 50 feet from Roadway Centerline (dBA)		Project Noise Level Increase (dBA)[2]	Increase Significance Threshold (dBA)	Exceeds Thresholds?
	Future Without Project[1]	*Future With Project*[1]			
Avalon Boulevard					
Albertoni Street to Victoria Street	70.8	70.8	0.0	*3.0*	No
Victoria Street to M.L.K. Jr. Street	74.0	74.0	0.0	*3.0*	No
M.L.K. Jr. Street to Del Amo Boulevard	75.1	75.2	0.1	*3.0*	No
Del Amo Boulevard to I-405	71.8	71.8	0.0	*5.0*	No
I-405 to Imperial Avalon Main Entrance	72.0	72.4	0.4	*3.0*	No
Imperial Avalon Main Entrance to 213th Street	71.6	71.7	0.1	*3.0*	No
213th Street to Carson Street	70.9	71.0	0.1	*5.0*	No
Carson Street to 220th Street	71.0	71.0	0.0	*3.0*	No
Grace Avenue					
North of 213th Street	49.4	52.5	3.1	*5.0*	No

Table 4.10-10. Future (2027) Traffic Noise Levels

Roadway Segment	CNEL at 50 feet from Roadway Centerline (dBA)		Project Noise Level Increase (dBA)[2]	Increase Significance Threshold (dBA)	Exceeds Thresholds?
	Future Without Project[1]	*Future With Project*[1]			
Main Street					
Torrance Boulevard to 213th Street	71.0	71.0	0.0	*3.0*	No
213th Street to Carson Street	70.7	70.7	0.0	*5.0*	No
Carson Street to 220th Street	70.4	70.4	0.0	*5.0*	No
Del Amo Boulevard					
Avalon Boulevard to Central Avenue	72.8	72.8	0.0	*3.0*	No
213th Street					
Grave Avenue to Avalon Boulevard	63.2	63.3	0.1	*5.0*	No
Carson Street					
Figueroa Street to Main Street	69.7	69.7	0.0	*5.0*	No
Main Street to Grave Avenue	69.2	69.2	0.0	*5.0*	No
Grave Avenue to Avalon Boulevard	69.7	69.7	0.0	*5.0*	No
Avalon Boulevard to I-405	71.3	71.3	0.0	*3.0*	No

Source: Noise modeling is based on traffic data within Imperial Avalon Project Average Daily Trip Segment Volumes excel sheet (Fehr & Peers 2021).
Notes: ADT = average daily traffic; dBA = A-weighted decibels; CNEL = community noise equivalent level.
1 The Future Year 2027 has been selected based on the Project Opening Year 2027.
2 Increase relative to traffic noise levels comparing the "Future With Project" scenario to the "Future Without Project" Scenario.

Stationary Operational Noise

Outdoor Gathering Areas

The Project would include a 3,000-square-foot dog park, a 7,200-square-foot greenbelt, and an 18,300-square-foot central park in the center of the Project site. The Project would also include a courtyard in the center of both Buildings A and B. These proposed parks have the potential to be used as outdoor gathering areas that could be accessed by groups of people intermittently for outdoor events (i.e., parties, lunch, dinner, etc.). Noise generated by groups of people (i.e., crowds) is dependent on several factors including vocal effort, impulsiveness, and the random orientation of the crowd members. Crowd noise is estimated to be 60 dBA at 1 meter (3.28 feet) away for raised normal speaking between two individuals (Hayne 2006). This noise level could feature a 5 dB upward adjustment for the impulsiveness of the noise source, and a -3 dB adjustment for the random orientation of the crowd members (Hayne 2006). For an assembly of, for instance, 200 park visitors having conversational speech at this level, the aggregate crowd noise would be approximately 82 dBA at 1 meter (3.28 feet) if treated as a point source centrally disposed in a park or greenbelt area. The 20 dB increase in the source magnitude is due to the quantity of the conversations simultaneously occurring (i.e., equal to 10*LOG[100]). Because sound naturally attenuates geometrically with distance (i.e., decreases by 6 dBA for each doubling of distance from a point source), the resulting estimated crown noise at the nearest sensitive receptor (residential property to the south located approximately 330 feet away from the nearest outdoor gathering area, the greenbelt) would be 42 dBA. Proposed

three-story townhomes on Lot E would be in between this greenbelt area and the nearest sensitive receptor, shielding this sensitive receptor and thereby reducing noise levels by approximately a minimum of 5 dB. Thus, noise from a crowd of this studied size would be around 37 dBA, which is substantially below the City's 50 dBA daytime and 45 dBA nighttime noise standard for residential properties. As such, Project-related operational noise associated with outdoor gathering areas would not result in a temporary or permanent increase in ambient noise levels in excess of the City's noise standards, and impacts would be **less than significant**.

Mechanical Equipment

The Project would include HVAC units located at on the roofs of the proposed three-story townhomes (45 feet in height) and atop the multifamily buildings. For the purposes of this analysis, given that HVAC units atop the multifamily buildings would be located at further distances to the sensitive receptors than from the townhome units (i.e., townhomes units are closer to the sensitive receptors), HVAC units for the townhome units are discussed to provide a more conservative analysis. HVAC systems can result in noise levels of approximately 55 dBA Leq at 2.9 feet from the source (Berger et al. 2010). The nearest sensitive receptor is located adjacent to the proposed townhomes, on the southern portion of the Project site, and the subsequent HVAC unit is approximately 30 feet to the south. This would place the HVAC units approximately 45 feet up and 30 feet to the north of the nearest sensitive receptors. Geometrically, this means that the HVAC unit could be located as close as 54 feet from a sensitive receptor. In addition, the HVAC units would not be visible to the nearest sensitive receptors as a parapet would separate the proposed townhomes and receptors. The resulting path occlusion between source and receptor would be expected to yield further HVAC unit noise attenuation of 5 dB. Therefore, the closest HVAC unit could produce a noise level of approximately 25 dBA. Even with as many as ten HVAC units producing comparable sound levels and at comparable distance to a common receptor point, the logarithmically combined noise level would be approximately 35 dBA due to acoustic principles (i.e., 25 + 10*LOG[10] = 35). Compared with the higher City's daytime (50 dBA) and nighttime (45 dBA) noise standards, exceedance due to operation of HVAC units at the Project site is not expected; therefore, impacts would be less than significant in this regard.

Garbage Trucks

The proposed Project would involve occasional trash/recycling pickups from slow-moving garbage trucks. Trash/recycling pickup would occur throughout the site. Low-speed truck noise results from a combination of engine, exhaust, and tire noise, as well as the intermittent sounds of back-up alarms and releases of compressed air associated with truck air-brakes. However, trash/recycling truck operations would be short-term and irregular and are considered part of standard operations in the area (i.e. existing trash/recycling collection activities at adjacent uses) and would not differ from the existing garbage truck operations on the Project site. Therefore, trash/recycling pickups would not introduce a new intrusive noise source compared to existing conditions. As such, a **less-than-significant** impact would occur in this regard.

Parking Areas

Traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale such as the CNEL scale. However, the instantaneous maximum sound levels generated by a car door slamming, engine starting up, and car pass-bys may be an annoyance to adjacent noise-sensitive receptors. Conversations in parking areas may also be an annoyance to adjacent sensitive receptors. According to the Project noise report, sound levels of speech typically range from 33 dBA at 48 feet for normal speech to 50 dBA at 50 feet for very loud speech. Estimates of the maximum noise levels

associated with typical parking lot activities are presented in Table 4.10-11, Typical Noise Levels Generated by Parking Lots.

Table 4.10-11. Typical Noise Levels Generated by Parking Lots

Noise Source	Maximum Noise Levels at 50 Feet from Source
Car door slamming	63 dBA L_{eq}
Car starting	60 dBA L_{eq}
Car idling	53 dBA L_{eq}

Source: Kariel 1991.

The Project proposes approximately 2,026 parking spaces within parking structures split between buildings A through D, and individual garages within the townhomes. Much of the parking, approximately 818 spaces, would be located within individual townhome garages and would not be a source of a parking lot noise. There would also be surface parking stalls in Lot E and within the internal drive aisles of the multifamily portion of the Project to serve guests, but would not be a source of substantial parking lot noise. The remainder of the parking spots would be split between buildings A through D and would be located within an at or above-grade parking structure. The nearest sensitive receptor would be located approximately 125 feet to the south of the proposed parking structure within building D. As shown in Table 4.10-11, parking lot noise levels could range between 53 dBA and 63 dBA at 50 feet. At a distance of 120 feet, parking lot noise would range from 45 to 55 dBA. However, parking lot noise is anticipated to be lower than the levels presented in Table 4.10-11 as the parking structures would be predominantly enclosed. Furthermore, a large existing wall located at along the Project site's southern border would separate the proposed parking structure in buildings C and D and sensitive receptors, further attenuating the parking lot noise levels. The combination of the predominantly enclosed parking structure and wall would lower parking lot noise levels by at least 10 dBA.

Therefore, estimated parking lot noise would range from 35 to 45 dBA. It should also be noted that only the southwestern portion of the parking structure in Buildings C and D would be located at this distance; a majority of the parking structure and spaces would be located farther away and would yield lower parking lot noises. As such, parking lot noise levels would not exceed the City's daytime (50 dBA) and nighttime (45 dBA) noise standards and noise impacts from parking lot activities would be **less than significant**.

Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

Less-than-Significant with Mitigation Incorporated. Activities associated with Project construction and operation would produce varying levels of vibration. During construction, heavy machinery used to construct the Project would generate construction noise as pieces of equipment move around the Project site, and vibratory drivers would generate construction noise as temporary shoring is installed to protect construction workers working at subsurface grades. During operation, vehicles such as delivery trucks and garbage trucks would generate small amounts of vibration as they access the Project site. As discussed in detail below, short-term construction noise impacts would be less-than-significant with mitigation incorporated; long-term operational impacts would be less than significant.

Short-Term Construction

Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations

that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The Caltrans Transportation and Construction Vibration Manual (Caltrans 2020a) identifies various vibration damage criteria for different building classes. This evaluation uses the Caltrans architectural damage criterion for continuous vibrations at older residential structures of 0.3 inch-per-second peak particle velocity (PPV). Further, as the nearest sensitive receptors to Project construction are residents, the criterion for human annoyance of 0.2 inch-per-second PPV is used. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural.

Construction of the proposed Project would occur over approximately 60 months and would include demolition, grading, paving, building construction, and architectural coatings. Construction activities are anticipated to require temporary shoring during the grading phase, off-site utility and signalized intersection improvements during the paving phase, pedestrian bridge construction during the building construction and paving phase, and vapor barrier installation during the building construction phase. The highest degree of groundborne vibration would be generated during the grading construction phase due to the operation of a vibratory driver during temporary shoring activities adjacent to residential structures along the south and southwestern Project boundary. Groundborne vibration levels associated with representative construction equipment are summarized in Table 4.10-12, Representative Vibration Source Levels for Construction Equipment.

Table 4.10-12. Representative Vibration Source Levels for Construction Equipment

Equipment		Approximate peak particle velocity at 5 feet (inch-per- second)[1]	Approximate peak particle velocity at 15 feet (inch-per-second)[1]	Reference peak particle velocity at 25 feet (inch-per-second)	Approximate peak particle velocity at 26 feet (inch-per-second)[1]	Approximate peak particle velocity at 60 feet (inch-per-second)[1]
Vibratory Driver[2]	*Upper Range*	8.206	1.579	0.734	0.692	0.197
	Typical	1.901	0.366	0.170	0.160	0.046
Vibratory Roller		2.348	0.452	0.210	0.198	0.056
Large bulldozer		0.995	0.191	0.089	0.084	0.024
Caisson Drilling		0.995	0.191	0.089	0.084	0.024
Loaded trucks		0.850	0.164	0.076	0.072	0.020
Small bulldozer		0.034	0.006	0.003	0.003	0.001

Source: FTA 2018.

1 Calculated using the following formula:
$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$
where: PPV (equip) = the peak particle velocity in inch-per-second of the equipment adjusted for the distance
PPV (ref) = the reference vibration level in inch-per-second from Table 7-4 of the FTA *Transit Noise and Vibration Impact Assessment Manual*
D = the distance from the equipment to the receiver

2 Vibratory driver is referenced as a sonic pile driver in the FTA *Transit Noise and Vibration Impact Assessment Manual* (dated September 2018).

Construction activities are anticipated to occur up to the Project boundary line. Therefore, the nearest structures (i.e., residential uses) would be located approximately 5 feet to the south and southwest of the Project site boundary. As indicated in Table 4.10-12, vibration velocities from typical heavy construction equipment operations that would be used during Project construction range from 0.034 to 8.206 inches per second PPV at 5 feet from the source of activity. Therefore, construction groundborne vibration would exceed the human annoyance criterion (0.2 inch-per-second PPV) and the structural damage criterion (0.3 inch-per-second PPV). As such, **MM-NOI-4** would be required to reduce vibration impacts to a less-than-significant level. **MM-NOI-4** is directly related to vibration control, as it requires a qualified professional to prepare construction vibration mitigation plans and to use pneumatic impact equipment. It also requires a buffer distance for heavy equipment operation adjacent to sensitive uses and structures. With implementation of **MM-NOI-4**, impacts would be **less than significant with mitigation incorporated**.

Long-term Operational

During operation, vehicles such as delivery trucks and garbage trucks would generate small amounts of vibration as they access the Project site. FTA guidance indicates that a loaded truck would exhibit no more than 0.076 inches PPV at a reference distance of 25 feet (FTA 2018). This reference PPV value can be used describe a transient vibration event such as a garbage truck passing by a residence. At a distance of only 28 feet between the point of pass-by and the receiving residential structure, assumed to be a modest wood-frame structure, which would thus exhibit a small vibration coupling loss between its foundation and the surrounding earth (FTA 2018), would result in an estimated interior vibration level of less than 0.035 inches per second, and would thus be below what Caltrans considers a "barely perceptible" threshold for transient sources (Caltrans 2020a). Thus, garbage truck pass-by vibrations is unlikely to be perceived by residential occupants surrounding the Project site. The proposed Project would not otherwise involve other sources of vibration, such as railroads or substantial heavy truck operations, and therefore would not result in vibration impacts at surrounding uses. Thus, impacts would **be less than significant**.

Would the Project have cumulatively considerable impacts with regards to noise?

Less-than-Significant Impact. Project generated noise, in combination with other projects, could combine to result in cumulatively considerable noise impacts. As discussed in detail below, cumulative noise impacts would be less than significant.

Cumulative Mobile Source Impacts

The proposed Project, in combination with cumulative projects, may result in increased long-term mobile noise levels in the Project vicinity. The Project's contribution to a cumulative traffic noise increase would be considered significant if the following occurred:

- The "Future With Project" traffic noise levels cause a 3.0 dBA or 5.0 dBA (i.e., Increase Significance Threshold) increase above the "Existing" traffic noise levels at sensitive land uses, depending on the land use compatibility identified in Table 4.10-5.

Noise, by definition, is a localized phenomenon and reduces as distance from the source increases. Consequently, only the proposed Project and growth due to occur in the site vicinity would contribute to cumulative noise impacts. Table 4.10-13, Cumulative Noise Scenario, lists the traffic noise effects along roadway segments in the Project vicinity for "Existing" and "Future With Project" conditions, including the applicable Increase Significance Threshold.

As indicated in Table 4.10-13, the cumulative increase in traffic noise levels, as a result of the proposed Project and cumulative projects, would not exceed the 5.0 dBA or 3.0 dBA Increase Significance Thresholds along any of the surrounding roadways. Therefore, traffic noise impacts would be **less than significant**.

Table 4.10-13. Cumulative Noise Scenario

Roadway Segment	CNEL at 50 feet from Roadway Centerline (dBA)		Cumulative Increase[2] (dBA)	Increase Significance Threshold (dBA)	Exceeds Thresholds?
	Existing	*Future With Project*[1]			
Avalon Boulevard					
Albertoni Street to Victoria Street	70.1	70.8	0.7	*3.0*	No
Victoria Street to M.L.K. Jr. Street	72.8	74.0	1.2	*3.0*	No
M.L.K. Jr. Street to Del Amo Boulevard	74.0	75.2	1.2	*3.0*	No
Del Amo Boulevard to I-405	71.2	71.8	0.6	*5.0*	No
I-405 to Imperial Avalon Main Entrance	70.5	72.4	1.9	*3.0*	No
Imperial Avalon Main Entrance to 213th Street	70.6	71.7	1.1	*3.0*	No
213th Street to Carson Street	69.7	71.0	1.3	*5.0*	No
Carson Street to 220th Street	70.4	71.0	0.6	*3.0*	No
Grace Avenue					
North of 213th Street	49.3	52.5	3.2	5.0	No
Main Street					
Torrance Boulevard to 213th Street	70.3	71.0	0.7	*3.0*	No
213th Street to Carson Street	70.0	70.7	0.7	*5.0*	No
Carson Street to 220th Street	69.8	70.4	0.6	*5.0*	No
Del Amo Boulevard					
Avalon Boulevard to Central Avenue	72.2	72.8	0.6	3.0	No
213th Street					
Grave Avenue to Avalon Boulevard	62.7	63.3	0.6	5.0	No
Carson Street					
Figueroa Street to Main Street	68.9	69.7	0.8	5.0	No
Main Street to Grave Avenue	68.6	69.2	0.6	5.0	No
Grave Avenue to Avalon Boulevard	68.8	69.7	0.9	5.0	No
Avalon Boulevard to I-405	70.7	71.3	0.6	3.0	No

Source: Noise modeling is based on traffic data within *Imperial Avalon Project Average Daily Trip Segment Volumes* excel sheet provided by the Project Applicant on March 1, 2021.
Notes: ADT = average daily traffic; dBA = A-weighted decibels; CNEL = community noise equivalent level.
1 The Future Year 2027 has been selected based on the Project Opening Year 2027.
2 Increase relative to traffic noise levels comparing the "Existing" scenario to the "Future With Project" Scenario.

Additionally, as discussed in Section 4.10.1, the Project is near I-405. The I-405 segment closest to the Project site (Carson Junction Route 110), experienced between 272,000 to 274,000 ADT during 2018, the most recent year of data (Caltrans 2020b). According to the Highway Traffic Noise Analysis and Abatement Policy and Guidance, a doubling of traffic volumes would result in a 3 dB increase in traffic noise levels, which is barely detectable by the human ear (USDOT 2017). The proposed Project would generate an additional 5,586 ADT compared to the existing conditions (Appendix I). As such, the Project-generated trips (i.e., 5,586 ADT) would not double existing traffic volumes along I-405 (i.e., ranging from 272,000 to 274,000 ADT) and an increase in traffic noise levels along I-405 would be imperceptible. This analysis conservatively assumes that every single Project-generated trip would travel along I-405. However, in reality, the Project's ADT would be split along the nearby local roadways. Thus, the Project's net new ADT would not have the potential to significantly increase traffic noise volumes along I-405. Impacts would be **less than significant**.

Cumulative Stationary Noise Impacts

Cumulative stationary noise levels associated with the proposed Project (i.e. outdoor gathering areas, mechanical equipment, and garbage trucks) were modeled with the SoundPLAN version 8.2 3-D noise model. SoundPLAN allows computer simulations of noise situations, and creates noise contour maps using reference noise levels, topography, point and area noise sources, mobile noise sources, and intervening structures. Noise contours associated with the Project's stationary noise sources are included in Appendix A of Appendix J and represent the collective noise level from outdoor gathering areas, mechanical equipment, and garbage truck operations at the Project site. As shown in Table 4.10-14, Cumulative Stationary Noise Levels at Adjacent Receivers, daytime exterior noise levels would range from 23.6 dBA to 33.4 dBA and nighttime exterior noise levels would range from 22.3 dBA to 31.9 dBA at the nearest sensitive receptors to the south of the Project site. It should be noted that the modeled noise contours indicated the sensitive receptors to the south of the Project site would experience the greatest increase in Project-generated noise levels. In addition, traffic along Grace Avenue would mask Project-generated noise levels experienced at sensitive receptors to the west of the Project site. Thus, cumulative noise levels from the Project's stationary noise sources would not exceed the City's noise standards. Impacts would be **less than significant**.

Table 4.10-14. Cumulative Stationary Noise Levels at Adjacent Receivers

Receiver	Calculated Exterior Daytime Noise Level (dBA)	Calculated Exterior Nighttime Noise Level (dBA)	City Daytime/Nighttime Noise Standard (dBA)	Exceed City Standard?
1	27.0	25.3	50 / 45	No
2	23.6	22.3	50 / 45	No
3	28.2	27.1	50 / 45	No
4	33.4	31.9	50 / 45	No
5	25.5	24.4	50 / 45	No
6	26.0	25.0	50 / 45	No
7	27.9	27.2	50 / 45	No

Source: SoundPLAN Model Version 8.2; refer to Appendix J.

4.10.5 Mitigation Measures

The following mitigation measures have been referenced in the preceding sections of this noise and vibration impact assessment.

MM-NOI-1 To reduce noise levels during construction activities, the Project Applicant must demonstrate, to the satisfaction of the City of Carson Community Development Director, that the Project complies with the following:

- Construction contracts must specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state-required noise attenuation devices.
- A sign, legible at a distance of 50 feet, shall be posted at the Project site providing a contact name and a telephone number where residents can inquire about the construction process and register complaints. This sign shall indicate the dates and duration of construction activities. In conjunction with this required posting, a noise disturbance coordinator shall be identified to address construction noise concerns received. The coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the disturbance coordinator shall notify the City within 24 hours of the complaint and determine the cause of the noise complaint (starting too early, malfunctioning muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the City. All signs posted at the construction site shall include the contact name and the telephone number for the noise disturbance coordinator.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.
- Per Section 5502 (c) of the Municipal Code, construction shall be limited to the hours between 7:00 a.m. and 8:00 p.m. daily (except Sundays and legal holidays). All construction activities shall be prohibited at night (between 8:00 p.m. and 7:00 a.m.) and on Sundays and legal holidays.

MM-NOI-2 In order to reduce construction noise, a temporary noise barrier or enclosure shall be used along the southern and southwestern portion property lines to break the line of sight between the construction equipment and the adjacent residences; Assessor's Parcel Number (APN) 7337-002-047, 7337-002-004, 7337-002-008, 7337- 002-010, 7337-002-012, 7337-002-040. The temporary noise barrier shall have a sound transmission class (STC) of at least 10 or greater in accordance with American Society for Testing and Materials Test Method E90, or at least 2 pounds per square foot to ensure adequate transmission loss characteristics. In order to achieve this, the barrier may consist of 3-inch steel tubular framing, welded joints, a layer of 18-ounce tarp, a 2-inch-thick fiberglass blanket, a 0.5-inch-thick weatherwood asphalt sheathing, and 7/16-inch sturdy board siding with a heavy duct seal around the perimeter. The length, height, and location of noise control barrier walls shall be adequate to assure proper acoustical performance. In addition, to avoid objectionable noise reflections, the source side of the noise barrier shall be lined with an acoustic absorption material meeting a noise reduction coefficient rating of 0.70 or greater in accordance with American Society for Testing and Materials Test Method C423. All noise control barrier walls shall be designed to preclude structural failure due to such factors as winds, shear, shallow soil failure, earthquakes, and erosion.

MM-NOI-3 To reduce construction truck trip noise impacts on sensitive receptors during construction activities, the Project Applicant must demonstrate, to the satisfaction of the City of Carson Community Development Director, that the Project complies with the following:

- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 7:00 a.m. to 8:00 p.m. on weekdays and Saturdays with no activity allowed on Sundays or holidays). A haul route exhibit shall be submitted to the City of Carson Community Development Director that designates delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise. Specifically, the haul route exhibit shall depict site access for construction haul truck trips along Avalon Boulevard.

MM-NOI-4 The following measures shall be incorporated on all grading and building plans and specifications subject to approval of the City's Building and Safety Division prior to issuance of a demolition or grading permit (whichever occurs first):

- The Project Applicant shall ensure construction equipment will not approach the construction buffer zone adjacent to the residential structures along the Project's southern and southwestern boundary. The buffer zone shall be tiered based on distances established in Table 4.10-12, Representative Vibration Source Levels for Construction Equipment. As shown in Table 4.10-12, vibratory drivers shall not operate within 60 feet of residential structures; vibratory rollers shall not operate within 26 feet of residential structures; and large bulldozers, caisson drilling activities, and loaded trucks shall not operate within 15 feet of residential structures. The buffer zone shall be in enforced around the existing residential structures between the hours of 7:00 a.m. and 8:00 p.m. pursuant to Municipal Code Section 5502 (c).
- The Project Applicant shall utilize a construction vibration monitoring system with the potential to measure low levels of vibration (i.e. 0.2 inch-per-second PPV and 0.3 inch-per-second PPV) to ensure human annoyance and structural damage does not occur. If the human annoyance criterion (0.2 inch-per-second PPV) and the structural damage criterion (0.3 inch-per-second PPV) are exceeded, construction must cease and alternate strategies shall be employed to ensure the human annoyance and structural damage vibration criteria are not exceeded.
- The Project Applicant shall conduct sensitivity training to inform construction personnel about the existing sensitive receptors surrounding the Project and about methods to reduce noise and vibration.

4.10.6 Level of Significance After Mitigation

On-site Project construction noise, due to its predicted magnitude and the proximity of off-site sensitive receptors, would remain significant and unavoidable even after implementation of **MM-NOI-1**, **MM-NOI-2**, and **MM-NOI-3**. All other potential noise and vibration impacts studied herein would, after proper application of relevant mitigation measures, would be reduced to less-than-significant levels.

4.10.7 References Cited

Berger, Elliott H., Rick R. Neitzel, and Cynthia C. A. Kladden 2010. Noise Navigator Sound Level Database with Over 1700 Measurement Values., July 6, 2010.

Caltrans (California Department of Transportation). 2020a. Transportation and Construction Vibration Manual. April 2020.

Caltrans. 2020b. Traffic Census Program. Accessed by November 24, 2020. https://dot.ca.gov/programs/traffic-operations/census.

City of Carson. 2004. Carson General Plan. 2004.

County of Los Angeles. 2001. County of Los Angeles County Code Section 12.08.490 and 12.08.400. November 2001.

Fehr & Pehrs. 2021. Imperial Avalon Project Average Daily Trip Segment Volumes (ADT Volumes) excel sheet.

FHWA (Federal Highway Administration). 2006. Roadway Construction Noise Model (FHWA-HEP-05-054).

FTA (Federal Transit Administration). Transit Noise and Vibration Impact Assessment Manual. September 2018.

Hayne, M.J., R.H. Rumble, and D.J. Mee. 2006. "Prediction of Crowd Noise," Acoustics. November 20, 2006.

Kariel, H.G. 1991. Noise in Rural Recreational Environments, Canadian Acoustics 19(5), 3–10, 1991.

OPR (State of California, Governor's Office of Planning and Research). 2017. General Plan Guidelines. 2017.

USDOT (U.S. Department of Transportation) 2017. *Highway Traffic Noise Analysis and Abatement Policy and Guidance*. Updated August 24, 2017. Accessed on February 2022. https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/polguide/polguide04.cfm.

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4.11 Population and Housing

This section describes the existing population and housing conditions of the Imperial Avalon Mixed-Use Project (Project or proposed Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the Project.

Comments received in response to the Notice of Preparation (see Appendix A-2) included concerns regarding displacement of existing residents, particularly the senior population, resultant from the Park closure, and impacts on the surrounding residential community resultant from the Project.

4.11.1 Existing Conditions

The Project site is developed with the Imperial Avalon Mobile Estates mobile home park (Mobile Home Park). The Mobile Home Park, originally developed in 1974, contains 228 mobile home spaces, a recreational vehicle storage yard with over 20 spaces, and a common area including a clubhouse, grass field, recreation building, swimming pool, and guest parking spaces.

In September 2019, the owner of the Mobile Home Park, Imperial Avalon, LLC (Mobile Home Park Owner; the Mobile Home Park Owner is also the Project Applicant), notified Mobile Home Park residents of its intention to close the Mobile Home Park. Closures of mobile home parks within Carson are subject to Carson Municipal Code Section 912821, which requires the preparation of a Relocation Impact Report (RIR) and requires that park owners take reasonable measures to reduce the impact of a closure on the ability of park residents to find alternative housing. Carson Municipal Code Section 9128.21 provides an application and permit process for approval of an RIR, which is subject to the requirements of Government Code Section 65863.7.[1] After compliance with Carson Municipal Code Section 912821 and approval of a RIR by the Carson Planning Commission (or the City Council, if the Planning Commission's approval of a RIR is appealed), park owners have a property right under state law to close a park at their discretion, subject to issuance of a 6-month notice of termination of the residents' tenancies in their space leases. The Mobile Home Park Owner completed its application for approval of an RIR, RIR No. 05-20, in April of 2020 by filing its RIR. A Planning Commission hearing to consider the RIR was conducted on May 13, 2020. At this hearing, the Planning Commission approved RIR No. 05-20 and associated measures with special conditions. This decision was subsequently appealed to the City Council. On July 7, 2020, by adoption of Resolution No. 20-113, the City Council affirmed the Planning Commission's approval of RIR No. 05-20 and imposed additional conditions and relocation requirements. A Notice of Exemption for the RIR was filed with the Los Angeles County Clerk-Recorder on July 7, 2020, and was posted for a 30-day period from July 17, 2020 through August 17, 2020. No challenges to the City of Carson's (City) approval of the RIR were timely filed.

Requirements of RIR Approval

As part of RIR No. 05-20, potential replacement housing options, including both mobile home and rental housing options, were identified for the Mobile Home Park's existing residents. Based on a thorough analysis of available housing options in the area, the impacts of the Park closure on its residents, and the relocation measures proposed by the Park Owner and necessary to reduce the impacts to the residents, the City conditionally approved the RIR subject to a detailed set of relocation measures set forth in Resolution No. 20-113. The applicable relocation

[1] This section was amended effective January 1, 2021, pursuant to enactment of Assembly Bill 2782. The City's final approval of RIR No. 05-20 was given on July 7, 2020, prior to AB 2782 becoming law, and was therefore subject to the requirements of Gov't Code Section 65863.7 as it existed prior to AB 2782.

measures to which each Mobile Home Park resident is entitled must be satisfied by the Park Owner with respect to such resident before that resident may be compelled by the Park Owner to exit the Park in connection with Park closure. Early termination agreements are also available subject to compliance with the terms of Resolution No. 20-113.

The measures required in the RIR take the form of three alternative benefit packages, also referred to as "options" because the displaced residents may select one from among them as they see fit in order to best meet their needs, contain varying provisions for coach relocation and financial assistance for mobile home owners. These options include: (i) Option A, whereby the displaced resident relocates his or her coach to an available space in another mobile home park with relocation and rental assistance provided by the Park Owner; (ii) Option B, whereby the Park Owner purchases the coach from the resident for lump sum payment of an appraised value that was established as part of the RIR approval; and (iii) Option C, whereby the resident receives a percentage (45%) of the established appraised value in exchange for the coach and also receives right of tenancy for a 20-year term in "future housing" (as referred to in Resolution No. 20-113, following a temporary stay in interim housing) located either on the Project site or elsewhere in the City in newly-constructed housing developed by the Park Owner or its affiliates, at rental rates subsidized to rates affordable to low income households (or to rates affordable to very low or extremely low income households subject to income qualification). Park residents are also entitled to receive certain other benefits irrespective of which option they choose, including the assistance of a relocation counselor (at no charge to the resident) to assist in identifying replacement dwellings and to coordinate moving arrangements and the payment of relocation assistance. Further relocation benefits enhancing the foregoing packages have been voluntarily agreed to by the Park Owner since the time of RIR approval.

Although residents have not yet been required to select their relocation benefit package option pursuant to the RIR approval, a covenant agreement has been recorded on the Project site sufficient to protect the Option C rights of all Park residents who may select it, irrespective of whether the 20-year subsidized tenancy in future housing is ultimately provided on the Project site or elsewhere in the City.

Population and Housing in Southern California

Regional Growth Forecast

The Project site is located within the jurisdiction of the Southern California Association of Governments (SCAG), one of the nation's largest metropolitan planning organization. The region consists of 6 counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura), 191 cities, and approximately 19 million residents. Approximately 6% of the national population lives in the SCAG region, and for over half a century, the region has been home to approximately half the population of California (SCAG 2020a). SCAG develops long-range Regional Transportation Plans (RTPs), including Sustainable Communities Strategy (SCS) and growth forecast components, regional transportation improvement programs, regional housing needs allocations, and a portion of the South Coast Air Quality Management District's plans.

As shown in Table 4.11-1, according to SCAG's regional growth forecast, the region is expected to increase by approximately 2.9 million residents, 1.3 million households and 1.3 million jobs between 2020 and 2045 (SCAG 2020a).

Table 4.11-1. 2020–2045 Population, Households, and Employment Projections in the Southern California Association of Governments Region

	2020	2030	2035	2045	Total Projected Growth 2020–2045
Population	19,518,000	20,821,000	21,443,000	22,504,000	2,986,000
Housing	6,333,000	6,903,000	7,170,000	7,633,000	1,300,000
Employment	8,695,000	9,304,000	9,566,000	10,049,000	1,354,000

Source: SCAG 2020a.

Local Growth Forecast

As of January 2020, the County of Los Angeles (County) has a population of approximately 10,172,951 people, and the City has a population of approximately 93,108 people and a housing total of 25,451 units (DOF 2021; SCAG 2020b). Table 4.11-2 shows population, household, and employment projections for the County and the City, as calculated by SCAG. The City's General Plan 2014–2021 Housing Element also provides population and housing projections and anticipated the 2020 population for the City to be 97,500 people (City of Carson 2013).

Table 4.11-2. Growth Forecast

	City of Carson			County of Los Angeles		
Year	*Population*	*Households*	*Employment*	*Population*	*Households*	*Employment*
2016	93,600	25,500	63,400	10,110,000	3,319,000	4,743,000
2020	93,108	25,451	43,920	10,172,951	NP	NP
2045	105,200	30,700	70,000	11,674,000	4,119,000	5,382,000

Source: SCAG 2020a; SCAG 2020b.
NP = Not Provided

In addition to the growth forecast, SCAG prepares a Local Profiles report for each city within the SCAG region about every two years. The Local Profile reports provide a variety of demographic, economic, education, housing, and transportation information for each city. Table 4.11-3 presents the actual 2018 population, 2018 households, and 2017 employment for the City and SCAG Region.

Table 4.11-3. Local Profiles Report for Carson, California

	City of Carson	SCAG Region
2018 Population	93,799	19,145,421
2018 Households	25,511	6,132,943
2017 Employment[a]	63,654	8,465,304

Source: SCAG 2019.
[a] Local Profiles did not provide employment for 2018, and thus, the 2017 employment is listed.

Jobs-to-Housing Ratio

The "jobs-to-housing ratio" measures the extent to which job opportunities in a given geographic area are sufficient to meet the employment needs of an area's residents. An area with a jobs-to-housing ratio that is lower than the regional ratio would be considered a "jobs poor" area, indicating that many of the residents must commute to places of employment outside of the area. Alternatively, an area with a jobs-to-housing ratio that is higher than the

regional ratio would be considered a "jobs rich" area, indicating the majority of persons that have jobs in the City are commuting from outside the City. A balanced community would have a match between employment and housing opportunities enabling most residents to also work in the community. Based on the population and household projections shown in Table 4.11-3, comparing the estimated number of jobs in the City to the number of housing units indicates a jobs-to-housing ratio of 2.48:1.00 for the City in 2016, and a jobs-to-housing ratio of 2.28:1 for the City in 2045. This ratio indicates that the City is providing more jobs than it is housing, reflective of the City's stature as an employment center. While the City's ratio is expected to decrease in the future, it would still remain a jobs-rich area under the SCAG projections, meaning that enough jobs would continue to be available such that residents would not be required to commute outside the City for employment. For comparison, the jobs-to-housing ratio in the SCAG region is 1.37:1 for the year 2020 and is projected to be 1.32:1.00 in 2045.

4.11.2 Relevant Plans, Policies, and Ordinances

Regional

California Mobilehome Residency Law

First codified in 1978, the 2021 California Mobilehome Residency Law, found in Section 798 et seq. of the Civil Code, establishes the rights and responsibilities of homeowners and park management and provides a statewide regulatory scheme governing the use and closure of mobile home parks. The Mobilehome Residency Law is provided by the California State Senate Select Committee on Manufactured Home Communities and is court-enforced, similar to provisions of conventional landlord-tenant law. State law requires mobile home park owners to provide written notice to mobile home park residents prior to closure and/or conversion to another type of land use, and also requires the park owner to prepare and file a written report on the impact of the closure of cessation of use with the local city or county government (Government Code Section 65863.7). Approval of the closure or conversion of a mobile home park to another use is conditioned upon approval of the closure impact report to determine the impact and effect the conversion will have on the residents' dislocation and their ability to find alternative housing. As noted above, Government Code Section 65863.7 was amended effective January 1, 2021, pursuant to enactment of AB 2782; the City's approval of RIR No. 05-20 was granted in 2020, and thus was subject to compliance with Government Code Section 65863.7 as it existed prior to the amendments enacted pursuant to AB 2782. The prior version of Government Code Section 65863.7 applicable to the approval of RIR No. 05-20 provided that the measures required to mitigate any adverse impact of the conversion, closure, or cessation of use on the ability of displaced mobile home park residents to find adequate housing in a mobile home park must not exceed the reasonable costs of relocation pursuant to Section 65863.7. In addition, the owner must notify residents of the park of the proposed change in use, in accordance with Section 65863.8.

Southern California Association of Governments

SCAG is the federally designated Metropolitan Planning Organization for six Southern California counties: Ventura, Orange, San Bernardino, Riverside, Imperial, and Los Angeles. SCAG develops plans for transportation, growth management, and hazardous waste management, and develops a regional growth forecast, which forms a foundation for SCAG's regional plans and regional air quality plans developed by the South Coast Air Quality Management District.

SCAG prepares several plans to analyze and address regional growth, including the Regional Comprehensive Plan (RCP), the Southern California Compass Growth Vision, the Regional Housing Needs Assessment (RHNA), the RTP, the Regional Transportation Improvement Program, and annual state-of-the-region reports to measure progress on

regional goals and objectives. Plans developed by SCAG that specifically pertain to population and housing are discussed herein.

Regional Housing Needs Assessment

SCAG serves as the regional council of governments for Southern California and is responsible for issues the RHNA for the six counties and 191 cities within the region, including the City of Carson. The RHNA is mandated by the State Housing Law as part of a periodic process of updating local housing elements in city and county general plans. The RHNA is produced by SCAG and contains a forecast of housing needs within each jurisdiction in the SCAG region for 8-year periods. The RHNA does not necessarily encourage or promote growth, but rather allows communities to anticipate projected growth and address existing need, so that they can grow in ways that enhance quality of life, improve access to jobs, transportation and housing, and not adversely impact the environment. The final 6th Cycle RHNA for all jurisdictions within the SCAG region was adopted by the SCAG Regional Council on March 4, 2021. This allocation identifies housing needs for the planning period between January 2021 and October 2029. The RHNA shows a need for 1,341,827 additional housing units within the SCAG region. Of the SCAG region allocation, the total assigned to the City is 5,618 units, and the total assigned to the County is 812,060 units (SCAG 2021). The City's total of 5,618 is distributed by income categories as follows: very low—1,770 units (31.5%); low—913 units (16%); moderate—875 units (15.5%); and above moderate—2060 units (37%). Once the RHNA is established, local jurisdictions must identify how they will meet their housing needs through the process of updating general plan housing elements. The City's latest housing element was produced in 2013 for the years 2014–2021. As of July 2022, the City is in the process of seeking approval from the California Department of Housing and Development (HCD) of its Housing Element update. The most recent version of the Housing Element update that was adopted by the City (on February 1, 2022) resulted in further comments from HCD dated May 6, 2022, necessitating another round of revisions before HCD approval can be attained.

Regional Comprehensive Plan

The 2008 RCP was prepared in response to SCAG's Regional Council directive in its 2002 Strategic Plan to define solutions to housing, traffic, water, air quality, and other regional challenges. The 2008 RCP is an advisory document that describes future conditions under current trends, defines a vision for a healthier region, and recommends an Action Plan with a target year of 2035. The RCP addresses land use and housing, transportation, air quality, energy, open space and habitat, water, solid waste, economy, security, and emergency preparedness. The RCP provides a series of recommended near-term policies that developers and stakeholders can consider for implementation, as well as potential policies for consideration by local jurisdictions and agencies when conducting project review.

The Land Use and Housing chapter of the RCP promotes sustainable planning for land use and housing in Southern California through maximizing the efficiency of the existing and planned transportation network, providing the necessary amount and mix of housing for a growing population, and enabling a diverse and growing economy and protecting important natural resources.

Regional Transportation Plan/Sustainable Communities Strategy

As the regional planning agency for the Southern California regions, SCAG is responsible for maintaining a continuing, cooperative and comprehensive transportation planning process, which involves the preparation and updating of a RTP every 4 years. On September 3, 2020, SCAG's Regional Council adopted the 2020–2045 RTP/SCS (Connect SoCal). Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more

sustainable growth pattern. Connect SoCal sets broad goals for the region and provides strategies to reduce problems associated with congestion and mobility. In recognition of the close relationship between traffic and air quality issues, the assumptions, goals, and programs contained in the RTP parallel those used to prepare the Air Quality Management Plan for the South Coast Air Quality Management District. The SCS is a component of the RTP document that demonstrates how the region will meet its greenhouse gas reduction targets as determined by the California Air Resources Board. As part of its RTP/SCS document, SCAG develops population and housing forecasts for the SCAG region and for the jurisdictions that make up the SCAG region. Population and housing forecasts for the SCAG region, the City and the County are shown in Tables 4.11-1 and 4.11-2.

Local

City of Carson General Plan

The City General Plan Housing Element sets forth the City's strategy to address the City's identified housing needs. This includes the preservation and enhancement of the community's residential character, the expansion of housing opportunities for all economic segments, and the provision of guidance and direction for local government decision making in all matters related to housing. The Housing Element is an 8-year plan, extending from 2014 to 2021. The City is currently in the process of updating its Housing Element and is seeking approval from the California Department of Housing and Development. The following goals and policies from the current Housing Element may be applicable to the Project.

Policy 1.1: Work toward the elimination and prevention of the spread of blight and deterioration, and the conservation, rehabilitation, and redevelopment of blighted areas within the City.

Policy 1.2: Provide financial assistance to encourage private sector investment in the City.

Policy 1.3: Promote economic well-being of the City by encouraging the development and diversification of its economic base.

Policy 1.4: Ensure that housing meets all applicable code requirements, without imposing unnecessary costs.

Policy 1.5: Establish and maintain development standards that support housing development while protecting the quality of life.

Goal 2: Maintenance and enhancement of neighborhood quality.

Policy 2.1: Develop safeguards against noise and pollution to enhance neighborhood quality.

Policy 2.2: Assure residential safety and security.

Policy 2.3: Improve housing and assistance of low and moderate income persons and families to obtain homeownership.

Policy 2.7: Require excellence in the design of housing through the use of materials and colors, building treatments, landscaping, open space, parking, environmentally sensitive and sustainable building design.

Goal 3: The City shall seek to provide an adequate supply of housing for all economic segments of the city.

Policy 3.1: Facilitate and encourage diversity in types, prices, ownership, and size of single-family homes, apartments, townhomes, mixed-use housing, transit-oriented development, and live-work housing.

Policy 3.2: Work to expand the resource of developable land by making underutilized land available for development.

Policy 3.3: Facilitate a mix of affordability levels in residential projects and dispersal of such units to achieve greater integration of affordable housing throughout the community.

Policy 3.4: Promote the availability of housing which meets the special needs of the elderly, homeless, persons with disabilities and large families.

Policy 3.6: Promote the development of multifamily housing.

Policy 3.7: Encourage residential development along transit corridors and in close proximity to employment, transportation and activity centers.

Goal 6: Long-term maintenance of private properties with common area ownership, such as condominiums and planned unit developments.

Policy 6.1: Amend existing, and ensure that future, association covenant documents address: proper maintenance of individual units as well as common areas, collection of assessments, etc.

Policy 6.7: Continue to work toward increasing and stabilizing the number of owner-occupied units within condominiums and planned unit developments.

City of Carson Municipal Code

The City implements its General Plan through specific plans and zoning. Article IX, Chapter 1, of the City of Carson Municipal Code (CMC), contains the City's Zoning Ordinance. This includes regulations concerning where and under what conditions various land uses may occur in the City. The Zoning Ordinance establishes the regulations for each zoning classification that establish the types of development allowed. Project implementation would require a zone change from Commercial, Automotive (east), and RM-8-D zone (west) with Design Overlay to "Imperial Avalon Specific Plan" (see Figure 3-4, Existing and Proposed Zoning, in Chapter 3, Project Description).

As discussed above, Carson Municipal Code Section 9128.21 details the requirements for developing and approving a RIR prior to closure or conversion of a mobile home park. Prior to the conversion of a mobile home park to any other use or to a vacant use, the applicant proposing such conversion is required to file an application with the City and obtain approval of the RIR from the City in accordance with the provisions contained in CMC 9128.21. This process was completed with respect to the Mobile Home Park in 2020.

4.11.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to population or housing are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to population or housing would occur if the Project would:

1. 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).

2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.
3. Result in a cumulatively considerable impact with regard to population and housing.

4.11.4 Impacts Analysis

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)?

Construction

Less-than-Significant Impact. The Project involves relocation of existing on-site structures and the construction of up to 1,213 high-density residential dwelling units and up to 10,352 square feet of commercial and food service uses. The Project would generate part-time and full-time jobs associated with Project construction for the duration of construction. Construction of the Project is anticipated to occur over a period of approximately 60 months. However, given the relatively temporary nature of the construction period, the demand for construction employment would likely be met within the existing and future labor market in the City and County. If construction workers reside outside of the City, these workers would likely commute to the Project site during the temporary construction period. The construction employment generated by the Project is not expected to increase the residential population of the City directly or indirectly and would not induce unplanned population growth or require permanent housing. Therefore, the Project's population growth impacts related to construction activities are considered **less than significant**. No mitigation is required.

Operation

Less-than-Significant Impact. The Project involves demolition of existing on-site structures and the construction of up to 1,213 mid-to-high-density residential dwelling units and up to 10,352 square feet of commercial and food service uses, Residential dwelling units and full-time job opportunities have the potential to result in population growth in the City.

The worst-case scenario would assume that all additional future residents currently reside outside the City and would relocate to the City. However, it is likely that at least some of the future residents would be existing City residents. However, SCAG's average household size can also be used to determine the anticipated residential population. According to SCAG's 2020–2045 RTP/SCS, there was an increase in average household size in the SCAG region from 3.04 in 2010 to 3.1 in 2016, but it is anticipated the average household size will decline from 3.1 in 2016 to 2.9 in 2045 (SCAG 2020a). Typically, household sizes for residential projects in the City are computed based on the General Plan's household size, but due to the lack of apartments in the City, this metric can overestimate actual household size for apartments. Therefore, in order to evaluate the appropriate occupancy metrics for the rental apartment units in the proposed Project, a study was prepared to analyze actual household sizes for comparable projects in Carson and the broader Los Angeles County region (RCLCO 2020). The Project's townhome population was determined using the City's standard household metric in Table 7 of the City's Housing Element (City of Carson 2004). Using this methodology, the estimated Project population is approximately 3,042 residents. The average household sizes for the various unit types are detailed in Table 4.11-4, Unit Mix and Project Population.

Table 4.11-4. Unit Mix and Project Population

Type of Unit	Number of Units	Household Size by Unit Type in the City	Number of Residents
Rental Apartments			
Studio apartment	126	1.6	202
One-bedroom apartment	363	2.0	726
Two-bedroom apartment	164	2.9	476
Senior apartment	180	1.5	270
Townhomes			
Townhome	380	3.6	1,368
Total	**1,213**	**Total**	**3,042**

Source: Appendix K.

SCAG's employment density factors can be used to determine the anticipated employment opportunities. According to SCAG's Employment Density Report, the average square foot per employee in the County is 424 square feet per employee for retail uses (SCAG 2001). Thus, the Project's 10,352 square feet of retail would generate approximately 24 employment opportunities. However, these 24 new employees are anticipated to be current residents of the City.

Population

Demographic projections for the City, as developed by SCAG and shown in Table 4.11-2, indicate the City's population is anticipated to increase from 93,600 persons in 2016 to 105,200 persons in 2045, an increase of 11,600 persons. The SCAG region's population (Table 4.11-1) is anticipated to increase from 19,518,000 persons in 2020 to 22,504,000 persons in 2045, an increase in 2,986,000 persons (SCAG 2020a).

Upon Project completion, it is possible that existing City residents could move into the proposed residential units. Accounting for the 373 residents were residing on the Project site as of the environmental baseline date (which is a conservative estimate given that prior to circulation of the Draft Environmental Impact Report, dozens of resident households had already permanently relocated to other housing away from the Project site pursuant to early termination agreements entered into in accordance with Resolution No. 20-113), it is assumed that 2,669 potential residents would move to the proposed units from a location outside the City. As described previously, SCAG has projected that the City will undergo an increase of 11,600 people from 2016 to 2045. The population growth anticipated to occur as a result of the Project (2,669 persons) represents 23% of the City's projected population growth for 2016 to 2045, and 0.09% of the SCAG region's projected population growth in the same time period. Therefore, the Project would not exceed the projected growth for the City, nor would it exceed the population growth projections for the SCAG region. It should be noted that while the Project may allow population growth in the City, the construction of 1,213 new residential units would supplement the City's housing stock and support the City's 6th cycle RHNA allocation, which shows a need for 5,618 additional housing units.

Other factors are also taken into consideration regarding a project's ability to substantially increase population growth. For instance, the removal of impediments to growth (e.g., constructing utility infrastructure and service systems in a previously undeveloped region) can induce growth. However, the Project would not have the potential induce growth via infrastructure development or expansion. The Project site is in a highly urbanized area and is surrounded by a mix of residential, commercial, industrial, and public land uses. The surrounding area is developed and supported by existing infrastructure. Thus, the Project would include connections to existing utilities and

infrastructure and would not result in the extension of infrastructure or roads into an undeveloped area leading to substantial population growth.

Housing

Housing projections for the City, as developed by SCAG and shown in Table 4.11-2, indicate the number of households in the City is anticipated to increase from 25,500 households in 2016 to 30,700 households in 2045, an increase of 5,200 households. Based on SCAG's growth projections for housing, the Project's net new 988 dwelling units would represent 19% of the 5,200 households projected to be added to the City between 2016 and 2045.

Additionally, the Project would contribute to state-mandated RHNA housing goals and would be consistent with regional efforts to boost housing growth to meet regional housing needs. In its 6th Cycle RHNA, adopted on March 4, 2021 and updated on July 1, 2021, SCAG identifies the City's share of housing needs as 5,618 new units (SCAG 2021). In response to the RHNA allocation, cities must update the Housing Element of the General Plan to address how to meet the housing needs allocation. Cities must prepare an annual progress report on the jurisdiction's status and progress in implementing its housing element, and thus, meeting its RHNA allocation. The City has identified the Project site for inclusion in its 6th Cycle RHNA Allocation, and additional housing development is needed in the City to meet local and regional housing goals.

The Project would not result in unplanned population growth in the City as a result of increased housing opportunities, as the number of dwelling units proposed as part of the Project is within the anticipated growth in the City, as projected by SCAG and as mandated by the 6th Cycle RHNA.

Employment

As indicated by SCAG and shown in Table 4.11-2, the projected number of jobs in the City is anticipated to increase from 63,400 in 2016 to 70,000 in 2045, for an increase of 6,600 jobs. As previously discussed, the Project would generate approximately 24 new employment opportunities. Based on SCAG's projected employment growth, the Project's anticipated 24 employees would represent approximately 0.36% of the 6,600 jobs that are expected to be added in the City between 2016 and 2045. As such, the Project is consistent with the projected employment growth for the City and would not result in unplanned population growth as a result of increased employment opportunities.

Jobs-to-Housing Ratio

The City is considered to be jobs-rich, given the jobs-to-housing ratio is greater than 1, and it is also higher than the ratio for the SCAG region. The Project would add a net increase of 988 new residential units and approximately 24 jobs. Since the Project would add more housing units than jobs to the Project site, the Project would lower the City's job-to-housing ratio and provide greater housing opportunities for existing residents within the City. However, growth projections for the City indicate that the jobs-to-housing ratio would remain high in 2045. Since the Project is within the anticipated growth projections, and adds housing in a jobs-rich City, the Project would not result in an imbalanced a job-to-housing ratio. In addition, due to the mixed-use nature of the Project, and the fact the Project provides more housing than jobs, the Project would not cause an imbalance (or exacerbate the City's existing imbalance) among jobs, housing, and population.

Summary

Once operational, the proposed 988 net new units associated with the Project would generate approximately 2,669 new residents to the City. The Project would not exceed the projected growth for the City or the SCAG region between 2016 and 2045. The population growth anticipated to occur as a result of the Project (2,669 people) represents 23% of the City's projected population growth for 2016 to 2045, and 0.09% of the SCAG region's projected population growth in the same time period. In addition, the Project's 988 net new residential units would contribute to the City's Housing Element objectives and policies and the state-mandated RHNA housing goals. The Project would also add approximately 24 new employment opportunities to the City, representing a modest 0.38% of the anticipated jobs that are expected to be added to the City between 2016 and 2045.

As further discussed in Chapter 5, Other CEQA Considerations, the Project site is in a highly urbanized area and is surrounded by a mix of residential, commercial, industrial, and public land uses. Given the developed nature of the surrounding area the proposed internal roadway network, utility connections, and utility infrastructure would not induce population growth by removal of impediments to growth (e.g., constructing utility infrastructure and service systems in a previously undeveloped region). Further, the Project's infrastructure plan would support the development of the Project and would not accommodate the growth beyond what is proposed. Therefore, given the urbanized nature of the City, the Project would not stimulate substantial unplanned population growth directly or indirectly and impacts related to population growth would be **less than significant**.

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

Less-than-Significant Impact. Under the existing conditions (i.e., as of the date of the Notice of Preparation of this Environmental Impact Report), the Project site consists of the 228-space Mobile Home Park. The Mobile Home Park consists of 225 mobile home coaches, which house residents over the age of 55 years old. The approval of the RIR, resulting in the closure of the Mobile Home Park, is separate from the proposed Project and will displace the existing residents irrespective of the Project (see Section 4.11.1). As discussed above, the RIR approval accounts for and requires measures to be taken by the Park Owner to reduce the adverse impacts of the Park closure on the ability of the residents to be displaced to find alternative housing. The displacement of Park residents from the Park is thus the result of closure of the Park pursuant to the RIR approval, which is not a part of the Project. The Park closure will occur irrespective of the Project. Accordingly, the Project will not result in displacement of any residents, and will not necessitate the construction of replacement housing elsewhere.

Although the RIR approval and consequent Park closure process will result in the displacement of all Park residents, it may not result in removal of all mobile homes from the Project site. More specifically, while residents who select Option A will relocate their coaches off-site as a part of the Park closure process, residents who select Options B or C will convey their coaches to the Park Owner, who will then be responsible for the costs and logistics of removing and disposing of the vacant mobile homes. However, the Park Owner will not be required to actually remove the vacant mobile homes as a condition of the RIR approval itself. Rather, the Park Owner would need to remove them prior to commencing a new use of the Project site that would be obstructed by their presence, or to eliminate a nuisance. The same can be said for the mobile home park-specific infrastructure and improvements, which would be left behind following relocation of the Park residents and coaches, including space pads, roads, utility improvements, and related infrastructure. Although this need would arise prior to commencing *any* new use or development that would be obstructed by the presence of the remaining coaches, infrastructure or improvements and is not unique to the Project, in the interest of providing a comprehensive informational document, this

Environmental Impact Report analyzes the environmental impacts of removing all mobile homes and mobile home park-specific infrastructure and improvements from the Project site, deeming those impacts Less-than-Significant.

Although the Project will not displace any residents or necessitate the construction of replacement housing elsewhere, the housing provided by the Project could serve as a source of future housing for the Park residents displaced by the RIR approval/Park closure, in addition to other available housing in the City. As of 2020, the City is estimated to contain 26,451 housing units. Of these total units, mobile homes are estimated to make up 9.3% of this total, at 2,456 units (SCAG 2020b). The estimated vacancy rate within the City is 2.8% (SCAG 2020b). However, due to the City's mobile home space rent control, there are few if any available mobile home spaces in the City; according to the RIR, as of the time of its preparation there were only 13 available vacant spaces within 30 miles of the Mobile Home Park.

The Project would provide an additional 988 dwelling units within the Project site over the existing condition, of which there would be 180 age restricted units for 55-years plus (assuming the maximum built out density). The project would thus make available new housing opportunities to both the current Park residents and the public generally. For current Park residents, this could include: (i) the provision of affordable housing units or market rate units in the Project for residents who select Option B, relocate to other housing, and subsequently qualify for such Project housing and decide to move back; and (ii) the provision of units subsidized to affordable housing rates to provide future housing in compliance with Option C, for residents who select it. As previously described, the proposed Project would construct 1,213 new residential units with 2,026 parking stalls as well as commercial uses and publicly accessible park space, replacing the existing 225 mobile home spaces. As part of the RIR conditions of approval, some of the proposed Project's housing units could be made available for existing Mobile Home Park residents who select Option C (if any), provided the Park Owner uses the Project as opposed to another development or site in the City to fulfill these obligations. The Project has sufficient units to accommodate any and all Park residents who may select Option C, and the Park Owner will be required to use the Project to do so pursuant to the RIR approval unless it is able to satisfy the obligations via another development or site in the City. In addition, through the Project's Development Agreement, the Project will include an affordability community benefit that would require provision of deed restricted affordable units on or off-site.

As stated above, the RIR and Park closure is separate from the Project and resulted in the City filing a Notice of Exemption that was not challenged. As stated above, the RIR and Mobile Home Park closure is separate from the Project and resulted in the City filing a Notice of Exemption that was not challenged. The separate RIR process has concluded, and pursuant to that process, the Park Owner was required by the City Council and Mobile Home Park closure approvals to provide relocation options as well as financial assistance, to reduce adverse impacts associated with the park closure's displacement of existing people or housing. Therefore, no displacement would occur as a result of Project approval. Between the requirements already in place as part of the RIR/Mobile Home Park closure process, the availability of other housing options within the City and the Project's provision of a net increase of 988 dwelling units (including an affordable housing public benefit), construction of replacement housing offsite would not be necessitated by implementation of the proposed Project, and impacts would be **less than significant.**

Would the Project have cumulatively considerable impacts with regards to population or housing?

Less-than-Significant Impact. As defined in the state CEQA Guidelines Section 15130, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, present, and probable future projects within the cumulative impact area for population, housing, and employment. The

cumulative study area used to assess potential cumulative population and housing impacts includes the City, and the SCAG region because employees of the Project may live within or outside the City's jurisdictional boundaries.

As discussed in Section 4.11.4, Impacts Analysis, the Project would not exceed the SCAG population, housing, or employment growth projections for the City. SCAG's 2020–2045 RTP/SCS services as a regional guide for future development in the counties of San Bernardino, Imperial, Los Angeles, Orange, Riverside, and Ventura. The growth anticipated for the SCAG region is shown in Table 4.11-2. The anticipated population growth as a result of the Project would represent 0.09% of the SCAG region's projected population growth. The 988 new residential units that would be added to the region as part of the Project would represent 0.07% of the SCAG region's projected increase in housing. The 24 jobs that would be added to the region as part of the Project would represent 0.0017% of the anticipated increase in jobs in the SCAG region. Therefore, the Project would not exceed the anticipated growth projections for the SCAG region, and would represent relatively small percentages of the anticipated population, housing, and employment growth in the region.

Due to the mixed-use nature of the Project, the Project would not cause an imbalance among jobs, housing, and population in the City or the SCAG region, and by adding far more housing than commercial square footage would help address the City's current jobs housing imbalance. Additionally, the Project would contribute to the RHNA housing production targets for the City. The Project is also consistent with increasing the number of households compared to jobs within the City. Further, as discussed previously, the Project would not create unplanned growth through extension of roadways or infrastructure. Therefore, the Project would not have the potential to contribute to any cumulative impacts, and cumulative impacts would be **less than significant**.

4.11.5 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required.

4.11.6 Level of Significance After Mitigation

All impacts were determined to be **less than significant**. No mitigation is required.

4.11.7 References

City of Carson. 2002. *General Plan Environmental Impact Report*. Accessed January 20, 2021. https://ci.carson.ca.us/content/files/pdfs/planning/generalplan/EIR.pdf.

City of Carson. 2013. *General Plan, 2014–2021 Housing Element*. Accessed January 20, 2021 https://ci.carson.ca.us/content/files/pdfs/planning/Carson2014-2021HousingElement_FINAL%20Draft_withAppendices.pdf.

DOF (Department of Finance). 2021. "E-1 Population Estimates for Cities, Counties, and the State – January 1, 2019 and 2020." Accessed January 20, 2021. http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-1/.

OPC (Overland, Pacific, & Cutler). 2020. *Relocation Impact Report*. March 2020.

RCLCO Real Estate Consulting. 2020. Household Size Analysis for New Apartment Development in Carson, California. August 2020.

SCAG (Southern California Association of Governments). 2001. Employment Density Study Summary Report. Accessed January 20, 2021. http://www.mwcog.org/file.aspx?A=QTTlTR24POOOUlw5mPNzK8F4d8djdJe4LF9Exj6lXOU%3D.

SCAG. 2019. Local Profiles Report 2019. *Profile of the City of Carson*. May 2019. Accessed January 20, 2021. https://scag.ca.gov/sites/main/files/file-attachments/carson_localprofile.pdf?1605664037.

SCAG. 2020a. "Technical Report - Current Context: Demographics & Growth Forecast." in the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy. Adopted September 2020. Accessed January 20, 2021. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf?1606001579.

SCAG. 2020b. Pre-Certified Local Housing Data for the City of Carson. August 2020. Accessed January 20, 20221. https://scag.ca.gov/sites/main/files/file-attachments/carson_he_0920.pdf?1603168715.

SCAG. 2021. *6th Cycle Regional Housing Needs Assessment*. Accessed July 20, 2021 https://scag.ca.gov/rhna.

4.12 Public Services and Recreation

This section describes the existing public services and recreation conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project).

4.12.1 Existing Conditions

This section describes the existing conditions in the Project area and also identifies the resources that could be affected by the Project.

Fire Protection

Fire services in the City of Carson (City) are provided by the Los Angeles County Fire Department (LACFD), also known as the Consolidated Fire Protection District of Los Angeles County. The LACFD provides fire response, emergency medical response, urban search and rescue, hazardous materials prevention and response, air operations, and other emergency response resources to the City. The LACFD is also responsible for inspection and plan check services.

There are six primary fire stations that provide both fire and emergency medical services to the City. Four of the stations are located within City boundaries*:* Fire Station 10, Fire Station 36, Fire Station 116, and Fire Station 127 (see Figure 4.12-1, Fire Stations in Carson). There is also a Fire Prevention Office located at Carson City Hall. Table 4.12-1 shows the fire stations in the City and the approximate distances to the Project site. The nearest station to the Project site is Fire Station 36, located at 127 West 223rd Street in Carson. This station is located approximately 1.6 roadway miles southwest of the Project site and would be the first responder to the site. In the event that Fire Station 36 cannot meet the immediate needs of a call for services independently, or does not have capability to address the full extent of a larger incident, the other fire stations within the City or the closest available LACFD resources could respond or provide support.

Table 4.12-1. Fire Stations in City of Carson

Fire Station No.	Address	Distance to Project Site (approx.)
Station No. 10	1860 E. Del Amo Boulevard	2.2 miles
Station No. 36	127 W. 223rd Street	1.6 miles
Station No. 116	755 E. Victoria Street	2.3 miles
Station No. 127	2049 E. 223rd Street	2.1 miles
Carson Fire Department Fire Prevention Office	701 E. Carson Street, B24	0.5 miles

Note: See Figure 4.12-1, Fire Stations in Carson.

The LACFD uses national guidelines of a 5-minute response time for the first-arriving unit for fire and emergency medical services responses, and 8 minutes for the advanced life support (paramedic) unit in urban areas. In urban areas, the LACFD has a response time standard of 5 minutes or less (County of Los Angeles 2015). According to the Carson General Plan, each of the primary fire stations established an expanded response matrix for its individual jurisdiction, which increases the resources available to help a fire station respond to an emergency (City of Carson 2004).

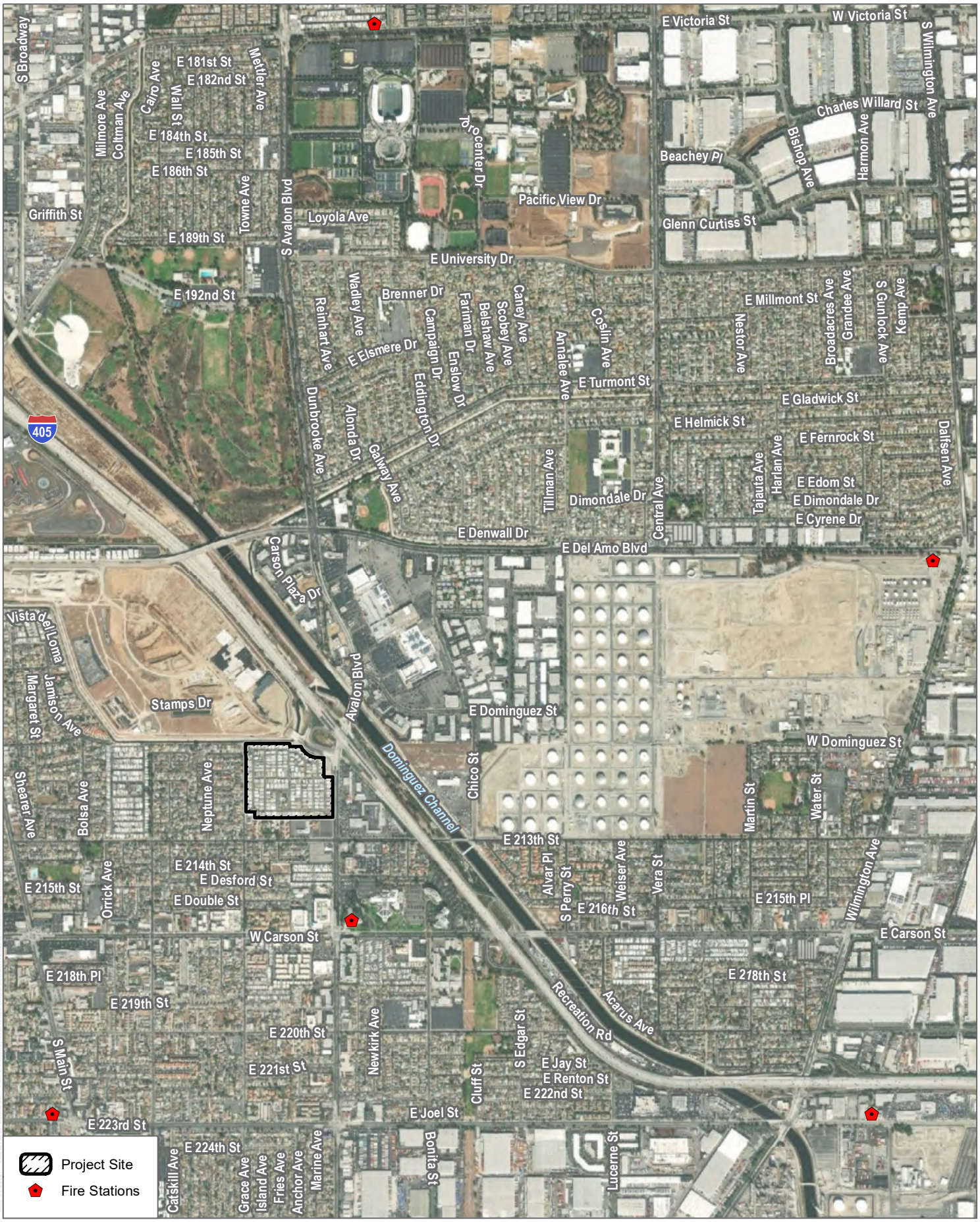
Police Protection

The Los Angeles County Sheriff's Department (LASD) provides police protection services to the City. There is one existing sheriff's station in the City, located at 21356 South Avalon Boulevard, approximately 0.2 miles south of the Project site. The Carson Sheriff's Station performs various law enforcement, community policing, traffic enforcement, special event management, and investigative functions, as well as various administrative duties within the neighborhoods and communities surrounding the Project site. Additionally, Carson Sheriff's Station units may respond to emergency calls in adjacent areas also served by LASD, in the event that the Carson Sheriff's Station unit is the closest responder. The Carson Sheriff's Station serves the City of Carson and several unincorporated Los Angeles County areas (unincorporated Rancho Dominguez, unincorporated Harbor City, and unincorporated Torrance) (LASD 2019). The City comprises a majority of the Carson Sheriff's Station's jurisdiction (LASD 2013).

As of 2017, the Carson Sheriff's Station had approximately 89 sworn officers, in addition to non-sworn personnel (City of Carson 2018). Based on the City's estimated population for 2020 of 93,108 people (as projected by the Southern California Association of Governments [SCAG]; see Section 4.11, Population and Housing, of this Environmental Impact Report [EIR]), the current service ratio is approximately 1 officer per 1,000 residents (City of Carson 2018). As stated in the County of Los Angeles General Plan EIR, LASD staff has indicated that an officer-to-population ratio of 1 officer to every 1,000 residents provides the desired level of service for its service area. This ideal standard is typically applied in EIRs for proposed projects that are served by the Los Angeles County Sheriff's Department as a means to develop a rough assessment of each project's impacts on law enforcement services (County of Los Angeles 2014). The current ratio provided by the Carson Sheriff's Station is in line with County of Los Angeles (County) goals. However, the 2004 City General Plan considers 1.7 officers per 1,000 residents to be an excellent service ratio for Carson.

LASD has established an optimal service response time of 10 minutes or less for emergency response incidents (a crime that is presently occurring and is an emergency situation), 20 minutes or less for priority response incidents (a crime or incident that is currently occurring but is not an emergency situation), and 60 minutes or less for routine response incidents (a crime that has already occurred and is not an emergency situation). These response times represent the range of time required to handle a service call, which is measured from the time a call is received until the time a patrol car arrives at the incident scene (County of Los Angeles 2014).

Response times in Carson are generally faster than the LASD response time standards. The Carson Sheriff's Station's response times for emergency, priority, and routine calls are 3.9 minutes for emergency response incidents, 7.1 minutes for priority response incidents, and 26.2 minutes for routine response incidents. As of 2017, LASD does not plan to relocate or expand the Carson Sheriff's Station (City of Carson 2018).



SOURCE: Esri and Digital Globe, Open Street Map

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0 1,100 2,200 Feet

FIGURE 4.12-1

Fire Stations in Carson

Imperial Avalon Mixed-Use Project

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Schools

The City is served by the Los Angeles Unified School District (LAUSD) and the Compton Unified School District. LAUSD has 14 elementary schools, 5 middle schools, and 6 high schools that serve the Carson area. Compton Unified School District has one elementary school, one middle school, and one high school serving the City. The Project site is located within LAUSD, Board District 7, and the assigned resident schools based on the Project location are Bonita Street Elementary (grades K–5), Andrew Carnegie Middle School (grades 6–8), and Carson Senior High School (grades 9–12) (LAUSD 2015, 2019). School locations are provided in Figure 4.12-2, Assigned Resident School Locations. In addition to public schools, the City has two parochial schools, an adult school, and the California State University Dominguez Hills campus (City of Carson 2002).

According to the California Department of Education, during the 2019/2020 school year, Bonita Street Elementary had 462 students enrolled, Andrew Carnegie Middle School had 729 students enrolled, and Carson Senior High School had 1,496 students enrolled (CDE 2020). The City's General Plan EIR indicates that these schools have capacity of 783 students, 2,228 students, and 3,600 students, respectively (City of Carson 2002).

Parks and Recreation

There are no existing public recreational opportunities within the Project site. The existing Project site has private recreation spaces for the Mobile Home Park's residents consisting of a swimming pool, recreation building, clubhouse, and grass field. Parks and recreational facilities near the Project site include facilities that are owned and maintained by both the City and County. The parks and recreational facilities in the City are shown in Table 4.12- 2. Carson Park and Pool and Perry Street Mini-Park are the closest parks to the Project site, each located approximately 0.8 roadway miles east and west of the Project site, respectively. Locations of nearby parks and recreation spaces are depicted in Figure 4.12-3, Parks and Recreation Facilities in Carson.

City of Carson Recreational Facilities

The City's parks and recreational facilities include neighborhood and community parks, community centers, joint-use school recreational space, golf courses, and privately owned recreation centers (City of Carson 2002). The City has 16 City-operated parks, one County park, one County golf course, and five school recreational spaces with joint-use agreements, totaling approximately 343.1 acres of park space within the City (City of Carson 2018, 2019). This acreage includes the parks managed by the City and/or school districts, as well as County-owned recreational facilities shown in Table 4.12-2.

Based on the City's estimated population for 2020 of approximately 93,108 people (as projected by SCAG; see Section 4.11, Population and Housing, of this EIR), the City currently has a parkland ratio of approximately 3.7 park aces per 1,000 residents. The City's General Plan sets a standard of 4 acres per 1,000 residents (City of Carson 2002). Therefore, the City currently has a parkland deficiency. The Countywide Comprehensive Parks and Recreation Needs Assessment categorized the City as high for park need, which can result from having a park deficiency issue for a long period of time (County of Los Angeles 2016). To achieve a parkland ratio of 4 acres per 1,000 residents, the City would need to add 36.9 acres of parkland, for a total of 380 acres of parkland in the City.

In addition to park facilities, the City has a variety of recreational and community facilities, such as the Veterans Sports Complex, the Carson Community Center, aquatic centers, the Civic Center, and library. The City's Parks and Recreation Department offers a variety of classes, including the following (City of Carson 2021a):

- Adult sports
- Fitness classes
- Special activities, such as cultural celebrations
- Senior, youth, and special needs recreation opportunities and classes

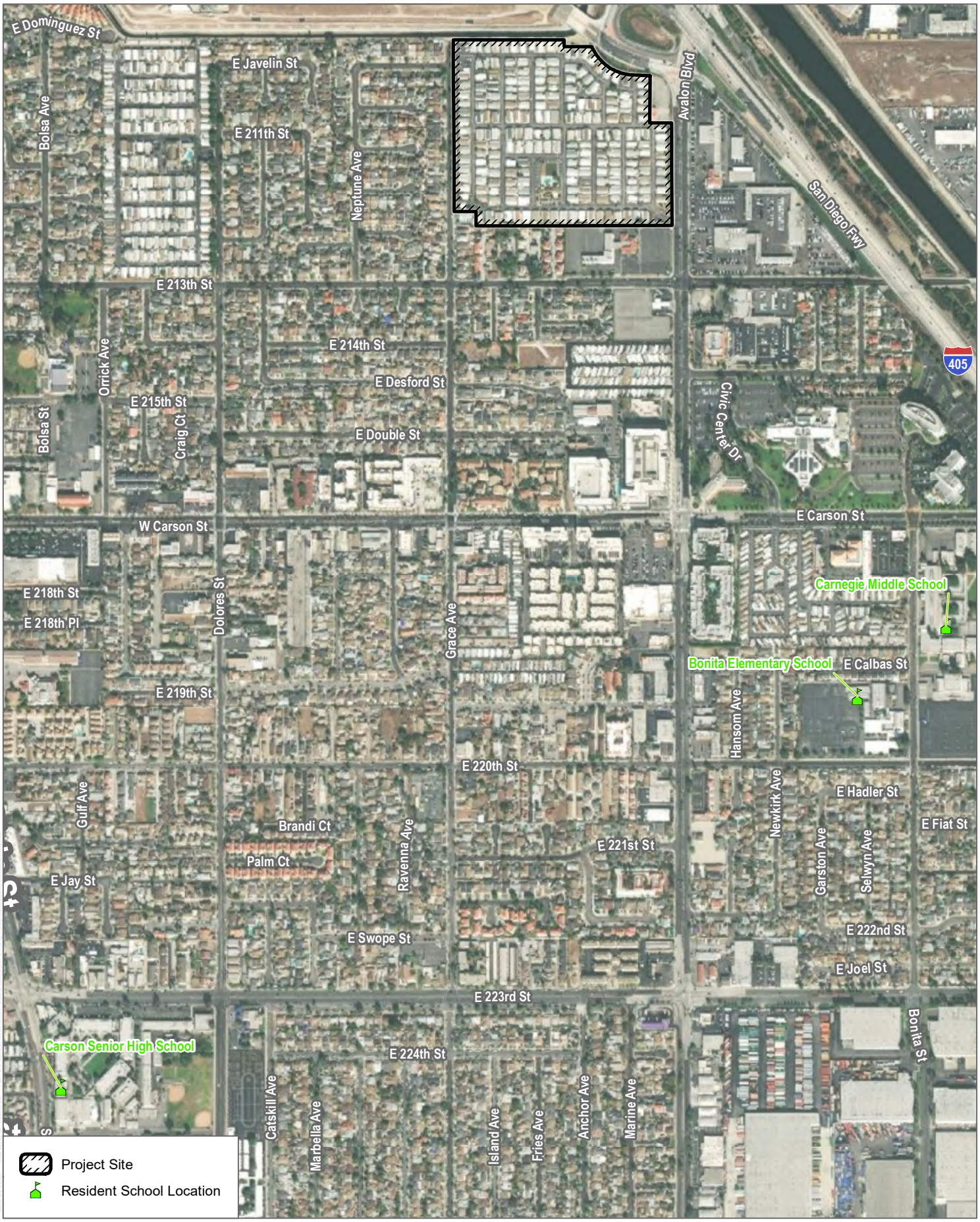
County of Los Angeles Recreational Facilities

The Los Angeles County Department of Parks and Recreation, Planning and Development Divisions, oversees the development, operation, and maintenance of County parks and recreational facilities (DPR 2020a). There are 181 County parks, ranging from local neighborhood parks, sports parks, and golf courses to regional recreational centers and nature centers and wildlife sanctuaries (DPR 2020b). The County's park system is composed of approximately 70,000 acres of land located within cities and unincorporated areas in Los Angeles County (County of Los Angeles 2015). County parks and recreational facilities located in the City include the 30-acre Victoria Community Regional Park and the 161.6-acre Links at Victoria Golf Course.

Table 4.12-2. Parks and Recreational Facilities in the City of Carson

Facility Name	Address	Distance to Project Site (approx. roadway miles)
City-Operated Mini-Parks		
Friendship Mini-Park	21930 S. Water Street	1.9 miles
Reflections Mini-Park	21208 Shearer Ave.	1 mile
Perry Street Mini-Park	215th & Perry Street	0.9 miles
Walnut Mini-Park	440 E. Walnut Street	3.2 miles
City-Operated Community Parks		
Anderson Park	19101 Wilmington Ave.	3.2 miles
Calas Park	1000 E. 220th Street	1 mile
Carriage Crest Park	23800 S. Figueroa Street	3.2 miles
Carson Park and Pool	21411 S. Orrick Ave.	1 mile
Del Amo Park	703 E. Del Amo Blvd.	1.3 miles
Dolphin Park	21205 S. Water Street	1.5 miles
Dominguez Park and Pool	21330 Santa Fe Ave.	3.2 miles
Foisia Park and Pool (formerly Scott Park and Pool)	23410 Catskill Ave.	2 miles
Hemingway Park and Pool	700 E. Gardena Blvd.	3.4 miles
Mills Park	1340 E. Dimondale Drive	2 miles
Stevenson Park/Gym	17400 Lysander Drive	3 miles
Veterans Park and Sports Complex	22400 Moneta Drive	2 miles
Recreational Space at Schools with Joint Use Agreements		
Caroldale Learning Community	22424 Caroldale Ave.	2.1 miles
Carson Senior High School	22328 S. Main Street	1.4 miles
Carson Street Elementary School	161 E. Carson Street	1.3 miles
Rancho Dominguez Preparatory School*	4110 Santa Fe Ave.	3.2 miles
Steven White Middle School	22102 S. Figueroa Street	2.3 miles
County-Operated Parks and Recreational Facilities		
Links at Victoria Golf Course	340 Martin Luther King Jr. Street	1.5 miles
Victoria Community Regional Park	419 Martin Luther King Jr. Street	1.5 miles
Other Community Facilities		
Carson Library	151 E. Carson Street	1 mile

Note: See Figure 4.12-3, Parks and Recreation Facilities in Carson.
Sources: City of Carson 2018, 2019
* Located in City of Long Beach



SOURCE: Esri and Digital Globe, Open Street Map

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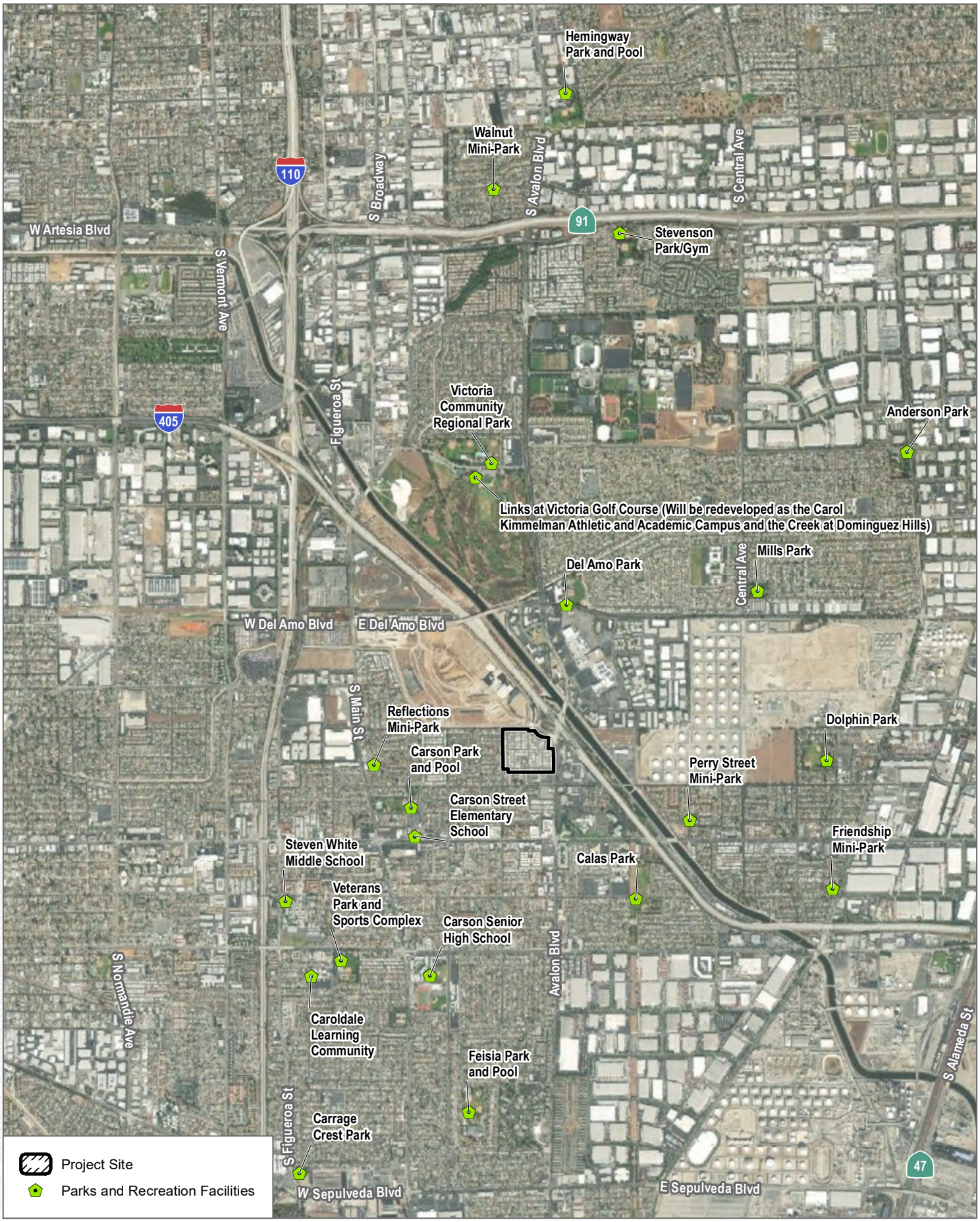
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FIGURE 4.12-2

Assigned Resident School Locations

Imperial Avalon Mixed-Use Project

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SOURCE: Esri and Digital Globe, Open Street Map

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0 1,900 3,800 Feet

FIGURE 4.12-3

Parks and Recreation Facilities in Carson

Imperial Avalon Mixed-Use Project

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Other Public Facilities

Libraries

The City is served by the County of Los Angeles Public Library system. The County of Los Angeles Public Library system provides library services to the County through its 85 library locations, four cultural resources centers, and three bookmobiles. The County of Los Angeles Public Library system services over 3.4 million residents living in unincorporated areas and 49 incorporated cities in Los Angeles County (Los Angeles County Library 2020). Two facilities are located in the City: the Carson Library and the Martin Luther King, Jr. Library. The service areas for the two libraries have a population of more than 116,000 (City of Carson 2002). The Carson Library is currently closed for renovations, and the Express Library is serving as a temporary replacement.

The County of Los Angeles Public Library system determines the adequacy of library services according to a ratio of the resident population to the total library floor area and collection size, using the standards of 0.5 square feet of library space per capita, 2.75 library items per capita, and 1 public access computer per 1,000 people served. Based on these service ratios and the estimated population of 93,108 in the City for 2020 (as projected by SCAG; see Section 4.11 of this EIR), the City requires approximately 46,554 square feet of library space; 256,047 library items; and 93 public computers. Under existing conditions, the community is underserved in terms of facility size and library materials (City of Carson 2002).

Carson Community Center

The Carson Community Center (also known as the Carson Event Center) is located in the Civic Center complex. The Community Center provides recreation programs, meeting rooms, and event space. The Carson Event Center is a 40,000-square-foot facility, and provides 23 meeting spaces, two kitchens, and a 12,000-square-foot ballroom, in addition to social services such as career services, senior social services, and a stroke exercise and therapy center. Meeting spaces and the ballroom are available for public rental (City of Carson 2018).

4.12.2 Relevant Plans, Policies, and Ordinances

State

California Fire Code

The California Fire Code is Chapter 9 of Title 24 of the California Code of Regulations. The California Fire Code provides regulations for safeguarding life and property from fire and explosion hazards derived from the storage, handling, and use of hazardous substances, materials, and devices. The provisions of this code apply to construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenance connected or attached to such building structures throughout the state.

Uniform Fire Code

The Uniform Fire Code contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The code contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, including regulations for building standards (also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with California Code of Regulations Title 8, Section 1270, Fire Prevention, and Section 6773, Fire Protection and Fire Equipment, the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include guidelines on the handling of highly combustible materials; fire hose size requirements; restrictions on the use of compressed air; requirements for access roads; and guidelines for testing, maintaining, and using all firefighting and emergency medical equipment.

Mutual Aid Agreements

The California Disaster and Civil Defense Master Mutual Aid Agreement, as provided by the California Emergency Services Act, provides statewide mutual aid between and among local jurisdictions and the state. The statewide mutual aid system exists to ensure that adequate resources, facilities, and other supports are provided to jurisdictions whenever resources prove to be inadequate for a given situation. Each jurisdiction controls its own personnel and facilities but can give and receive help whenever needed.

Senate Bill 50 and Proposition 1A

Senate Bill (SB) 50, the Leroy F. Greene School Facilities Act of 1998 was signed into law on August 27, 1998. It placed a $9.2 billion state bond measure (Proposition 1A), which includes grants for modernization of existing schools and construction of new schools, on the ballot for the November 3, 1998, election. Proposition 1A was approved by voters, thereby enabling SB 50 to become fully operative. Under SB 50, a program for funding school facilities largely based on matching funds was created. The construction grant provides funding on a 50/50 state and local match basis, and the modernization grant provides funding on a 60/40 basis. Districts unable to provide some, or all, of the local match requirement may meet financial hardship provisions and are potentially eligible for additional state funding.

In addition, SB 50 allows governing boards of school districts to establish fees to offset costs associated with school facilities made necessary by new development in their district. Payment of these fees is required prior to issuance of building permits. Pursuant to California Government Code Section 65995, the payment of these fees by a developer serves to fully mitigate all potential project impacts on school facilities.

California Education Code

LAUSD's facilities and services are subject to the rules and regulations of the California Education Code and governance of the State Board of Education. Traditionally, the state has passed legislation for the funding of local and public schools and provided the majority of monies to fund education in the state. To assist in providing facilities to serve students generated from new development projects, the state passed Assembly Bill 2926 in 1986, allowing school districts to collect impact fees from developers of new residential, commercial, and industrial developments. Section 65996 of the California Government Code designates Section 17620 of the Education Code (the mitigation

fees authorized by SB 50) and Section 65970 of the California Government Code to be the exclusive method for considering and mitigating development impacts on school facilities. Section 65996 legislates that development impact fees collected under Section 17620 of the Education Code (the mitigation fees authorized by SB 50) and Section 65970 of the California Government Code be deemed, "to provide full and complete school facilities mitigation." Under California Government Code Section 65996, a state or local agency may not deny or refuse to approve the development of real property on the basis that school facilities are inadequate.

Quimby Act

California Government Code Section 66477, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The required dedication or fee is based on residential density, parkland cost, and other factors. Land dedication and fees collected pursuant to the Quimby Act may be used for acquisition, improvement, and expansion of park, playground, and recreational facilities, or the development of public school grounds. Per Ordinance No. 19-1927, the City's "Quimby Ordinance" was removed from the Carson Municipal Code and replaced by the City's Interim Development Impact Fee Program (Ordinance 19-1931), which collects fees from new development and allocates a portion of the fees collected toward parks.

Local

City of Carson General Plan

The Safety Element of the Carson General Plan evaluates potential natural and human-caused hazards that have the potential to endanger the welfare and safety of the general public, and aims to reduce the potential risk of death, injuries, property damage, and the economic and social dislocation resulting from them. The Safety Element identifies goals, policies, and implementation actions to reduce the impacts of hazards (City of Carson 2004). The Parks, Recreation, and Human Services Element identifies a need for additional recreational facilities, enhanced safety and maintenance of parks, and affordable community recreation and education programs (City of Carson 2004).

The following goals and policies related to public services may be applicable to the Project (City of Carson 2004):

Goal SAF-5: Minimize the public hazard from fire emergencies.

SAF-5.1: Coordinate with the Fire Department to provide fire and paramedic service at standard levels of service.

SAF-5.2: Continue to involve the Fire Department in reviewing and making recommendations on projects during the environmental, site planning and building plan review processes.

SAF-5.5: Continue to enforce current regulations which relate to safety from fire, particularly in critical and high occupancy facilities.

Goal SAF-6: Strive to provide a safe place to live, work and play for Carson residents and visitors.

SAF-6.1: Coordinate with the Sheriff's Department to provide sheriff service at standard levels of service.

SAF-6.2: Continue to involve the Sheriff's Department in reviewing and making recommendations on projects during the environmental, site planning and building plan review processes. To this end, promote the

development of defensible spaces, or Crime Prevention Through Design (CPTD), through the use of site and building lighting, visual observation of open spaces, and secured areas.

Goal P-1: Increase of and improvements to park, recreational and cultural facilities to meet the needs of existing and future residents and workers in the City.

City of Carson Municipal Code

Article 3, Chapter 1 of the Carson Municipal Code adopts by reference, with local amendments, Title 32, Fire Code, of the Los Angeles County Code, which constitutes an amended version of the 2016 California Fire Code.

Article 11 of the Carson Municipal Code contains the Interim Development Impact Fee Ordinance (Ordinance 19-1931, Section 2), which authorizes the City to collect fees from development projects for the purpose of defraying all or a portion of the costs of public facilities.

Interim Development Impact Fee Program

On April 16, 2019, the City Council adopted Ordinance No. 19-1931 to implement the City's Interim Development Impact Fee (IDIF) Program. Development impact fees are a commonly used method of collecting a proportional share of funds from new development for infrastructure improvements and/or other public facilities. Fees collected are restricted to funding capital costs for new facilities or upgrades to existing facilities and are not used for general operations and/or maintenance. These fees also reduce the economic burden on cities managing population growth by requiring new development to pay for eligible capital improvement projects.

The City of Carson's IDIF Program funds six capital improvement components: Traffic, Parks, Beautification, General Government Facilities, Transportation Infrastructure, and Utilities and Sustainability. The IDIF was adopted to address the infrastructure needs associated with new developments, and these fees differ based on the size and type of development project (City of Carson 2021b).

City-Wide Community Facilities District (CFD No. 2018-01)

On November 7, 2018, the City adopted Resolution No. 18-119 to form Community Facilities District No. 2018-01 (CFD) for maintenance and services. This CFD also included a City-wide future voluntary annexation area. New development projects that impose negative fiscal impacts on recurring City services now have the option to annex into the CFD with the approval of their property owner.

The City completed a Fiscal Impact Analysis, dated March 2019, to quantify the financial impacts of new projects onto City's current financial resources. The Fiscal Impact Analysis provides a comprehensive review of the net fiscal impact that would be placed upon the City based on the potential future development or redevelopment throughout the City.

Based on the Fiscal Impact Analysis, residential and industrial projects impose negative fiscal impacts and are therefore required to mitigate their fiscal impacts. Annexation into the CFD would satisfy this requirement.

Los Angeles County Fire Code

Title 32, the Los Angeles County Fire Code, consists of fire prevention provisions, development specifications, and fuel modification requirements. Fire prevention provisions covered in the County Fire Code include fire apparatus

access roads, adequate road widths, all-weather access requirements, fire flow requirements, and fire hydrant spacing. The Fire Code also requires clearance of brush around structures located in hillside areas that are considered at risk for wildland fire.

Los Angeles County Operational Area Emergency Response Plan

The County approved an Operational Area Emergency Response Plan in 1998, which was updated in 2012 (County of Los Angeles 2012). The plan establishes the County's emergency organization; assigns tasks; specifies policies and general procedures; and provides for coordination of planning efforts among the various emergency departments, agencies, special districts, and jurisdictions that make up the County Operational Area. The plan ensures the most effective allocation of resources for the protection of the public in the event of an emergency.

4.12.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to public services and recreation are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to public services and recreation would occur if the Project would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
    a. Fire protection.
    b. Police protection.
    c. Schools.
    d. Parks.
    e. Other public facilities.
2. 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.
3. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.
4. Result in a cumulatively considerable impact with regard to public services or recreational facilities.

4.12.4 Impacts Analysis

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:

Fire protection?

Less-than-Significant Impact. The addition of residential and commercial uses on the Project site would result in an overall increase in the intensity of use on the site, and thus, could result in increased calls for service to LACFD. Six primary LACFD fire stations provide fire and emergency medical services to the City, four of which are located within

City boundaries. As the closest station the Project site (approximately 1.5 miles southwest via local roads), Station 36 would provide primary response to the Project site in the event of a fire or emergency. In the event that Station 36 could not meet the immediate needs of a call for services independently, or does not have capability to address the full extent of a larger incident, the closest available LACFD resources could respond or provide support.

In a letter submitted in response to the Notice of Preparation for the Project, the LACFD did not indicate if there was a need for an additional fire station to serve the Project area due to the incremental growth in the area (see Appendix A-2, NOP Comment Letters). Payment of CFD special taxes annually would allocate funds towards government facilities, such as fire stations. Payment of the City's CFD would help offset incremental impacts to LACFD resources and facilities by helping to fund capital projects, as needed.

Further, the Project would be constructed in compliance with LACFD requirements for building materials, adequate "fire flows" (i.e., water volume and pressure), width of emergency access routes, turning radii, automatic sprinkler systems, fire alarms, and height requirements along emergency access routes. Compliance with the LACFD standards would be ensured through the plan check process and fire review prior to the issuance of building permits for the Project. Additionally, all development within the Project area would be subject to compliance with the existing regulations specified in the California Fire Code, California Building Code, International Fire Code, Carson Municipal Code Chapter 1 (Fire Prevention), the Los Angeles County Fire Code (Title 32 of the County Municipal Code), and specific fire and life safety requirements in effect at the time of the plan check review. The primary access point for the Project would be via a signalized driveway on Avalon Boulevard. Secondary access points would provide additional emergency access options. These entrances would provide access to the residential and commercial uses through internal driveway connections. The width of drive aisles would be designed to meet City standards and LACFD access requirements.

Based on the proximity of the Project site to existing LACFD facilities, and since the Project site is located in a developed part of the City that is already within the service area of LACFD, it is anticipated that the Project could be served by LACFD without substantially affecting existing response times or other performance objectives. Additionally, the aforementioned fire safety features and compliance with fire code standards would reduce the potential demand for fire services by decreasing the likelihood and/or severity of a fire emergency at the Project site, and the payment of CFD fees would help to fund new LACFD capital and labor expenditures. As such, it is not anticipated that the Project would significantly impact LACFD performance objectives to the point that new or expanded facilities would be required. Therefore, impacts related to LACFD facilities would be **less than significant**.

Police protection?

Less-than-Significant Impact. As with fire protection services, the increased intensity of use on the Project site attributable to the Project would be expected to increase the frequency of emergency and non-emergency calls to the Sheriff's Department. Although it is likely that the Project site currently places some demand on the Sheriff's Department, the Project is expected to increase demand relative to existing conditions.

As previously discussed, the LASD provides police protection services to the City out of the Carson Sheriff's Station. Based on the number of sworn officers (89) at the Carson Sheriff's Station in 2017, and the 2020 population projections for the City (96,100 people), the current service ratio of the Carson Sheriff's Station is approximately 1 officer per 1,000 residents (City of Carson 2018). As stated in the County General Plan EIR, LASD staff has indicated that an officer-to-population ratio of 1 officer to every 1,000 residents provides the desired level of service for its service area (County of Los Angeles 2014). Under existing conditions, the Carson Sheriff's Station response times (shown in Section 4.12.1, Existing Conditions) generally meet or exceed the LASD response time standards. Since the population growth anticipated to occur as a result of the Project is within the population growth projections for the City, the Project is not anticipated to have a negative impact on service ratios.

Although the Project is not anticipated to adversely impact law enforcement services, there are operational practices and design elements that would be incorporated into the Project to increase safety and reduce the potential for crime to occur, which could lessen the demand for police protection services at the Project site. The Project would be designed to minimize secluded areas and potential hiding places. Signage and lighting would be used to facilitate wayfinding and safe pedestrian movement throughout the site. Lighting levels would vary depending on the specific use and conditions, but the overall consideration would be to provide lighting levels sufficient to provide security and safety. Security cameras would be installed in commercial areas to monitor the entrances/exits, cash drawer areas, and general interiors of commercial operations, as well as the exteriors and common areas of residential buildings; 24-hour security would be provided on site as a further deterrent to criminal activity. The design and selection of street furniture and common areas would include considerations for the security, safety, comfort, and convenience of the user. These design and operational practices, commonly referred to as Crime Prevention through Environmental Design, would lessen the demand for police protection services at the Project site by reducing the potential for crime to occur.

In addition to these design and operational practices, the Project would be required to pay development impact fees to the City prior to the issuance of building permits. The City's CFD fees would be collected annually to help offset impacts to City resources and facilities Payment of fees per the City's CFD would help offset incremental impacts to resources and facilities by helping to fund capital projects, as needed. As a result, it is not anticipated that the Project would impact police services such that the need for new or physically altered law enforcement facilities would arise as a result of the Project. Therefore, impacts associated with LASD facilities would be **less than significant.**

Schools?

Less-than-Significant Impact. The need for new school facilities is typically associated with a population increase that generates an increase in enrollment large enough to cause new schools to be constructed. The City is served by LAUSD and Compton Unified School District, and the assigned resident schools based on the Project location are Bonita Street Elementary (grades K–5), Andrew Carnegie Middle School (grades 6–8), and Carson Senior High School (grades 9–12) (LAUSD 2015, 2019). During the 2019/2020 school year, Bonita Street Elementary had Bonita Street Elementary had 462 students enrolled, Andrew Carnegie Middle School had 729 students enrolled, and Carson Senior High School had 1,496 students enrolled (CDE 2020). These schools have a maximum capacity of 783 students, 2,228 students, and 3,600 students, respectively (City of Carson 2002). Therefore, each of these schools has remaining capacity to accommodate additional students. Further, as previously discussed, the population growth anticipated to occur as a result of the Project is within local and regional growth projections.

Based on the LAUSD's 2020 Developer Fee Justification Study (LAUSD 2020), the anticipated student generation for the proposed 1,033 residential units (reflects units without senior housing) is outlined in Table 4.12-3, Project Student Generation. Assuming that the students that are added to the City by the Project would attend the aforementioned resident schools, the number of students anticipated to be generated by the Project would not result in any of the resident schools being over capacity.

Table 4.12-3. Project Student Generation

Grades	Generation Rate	Students
Elementary	0.2269	235
Middle School	0.0611	63
High School	0.1296	134
	Total	**432**

Source: LAUSD 2020

Additionally, the LAUSD charges development impact fees on residential and commercial development at a rate of $4.08 per square foot for residential development and $0.66 per square foot of commercial development (LAUSD 2020). These fees are used to offset potential impacts to schools. In addition, the Project would be subject to SB 50, which requires the payment of mandatory impact fees to offset any impact to school facilities. In accordance with SB 50, the Project would pay its fair share of school impact fees based on the number of proposed dwelling units and square footage per Government Code Section 65995(h). The use of school impact fees, collected under the provisions of State law, would supply the funding necessary to add classrooms as required, and are deemed to fully mitigate impacts. Therefore, with payment of all applicable impact fees, potential impacts to schools and school facilities as a result of the Project would be **less than significant.**

Parks?

Less-than-Significant Impact. The City's existing parks include 16 City-operated parks, one County park, one County golf course, and five school recreational spaces with joint use agreements, totaling approximately 343.1 acres of parkland in the City (City of Carson 2018, 2019). The City's General Plan identifies a standard of 4 acres per 1,000 residents (City of Carson 2002). Based on the City's estimated population for 2020 of approximately 93,108 people (as projected by SCAG; see Section 4.11 of this EIR), the City currently has a parkland ratio of approximately 3.7 park aces per 1,000 residents, inclusive of County-operated parkland and joint-use school facilities. Therefore, the City currently has a parkland deficiency regardless of the Project. To achieve a parkland ratio of 4 acres per 1,000 residents, the City would need to add 36.9 acres of parkland in the City.

In addition to the nearby recreational facilities, Project residents would have access to common open spaces and recreational amenities that would be provided as part of the Project. Notably, the Project would include a 21,300-square-foot publicly accessible, privately maintained park, which would be comprised of walkways, a children's play area, a dog park, and a performance pavilion. The construction of this park would supplement the City's park supply. Additionally, residents of Buildings A, B, and D would each have a swimming pool area and each residential unit would be provided with private open space such as balconies, terraces, and stoops for individual units. Thus, the Project would provide opportunities for passive and active recreation on site. These on-site amenities would provide an alternative to off-site public parks and recreational facilities, allowing the Project's residents to recreate on the Project site while incrementally reducing potential impacts to off-site public parks and recreational facilities.

Increased demand for neighborhood and regional parks or recreational facilities is most commonly associated with a substantial population increase such that existing parks and recreational amenities would be over-utilized and deteriorate as a result. As discussed in Section 4.11 of this EIR, the Project is anticipated to add approximately 2,669 new residents to the City, which represents 23% of the City's projected population growth for 2020 to 2045. Thus, the population growth that is anticipated to occur as a result of the Project is within City and regional growth projections, as projected by SCAG. At least a portion of these residents are anticipated to frequent the various public parks and recreation facilities located in proximity to the Project site. Carson Park and Pool and Perry Street Mini-Park are the closest parks to the Project site, each located approximately 0.8 roadway miles east and west of the Project site, respectively. Carson Park is composed of 11 acres of recreational space, offering amenities such as baseball fields, basketball courts, picnic areas, a swimming pool, a fitness center, a gymnasium, multi-purpose rooms, a splash pad, and open green space. Perry Street Mini-Park is a 1.3-acre facility with a sand play area, play apparatuses, park furniture, and open green space (City of Carson 2021a). Additionally, the Carson Community Center is located approximately 0.4 miles south of the Project site.

In addition to the park space provided by the Project, there are also proposed nearby park-improvement projects. A nearby proposed project includes a park component, consisting of 6.29 acres of passive and active publicly-accessible open space and amenity areas, which would be easily accessible from the Project site via the proposed pedestrian bridge. Although privately owned, this project would provide additional park facilities within the City and would improve existing park facilities.

Although the City is currently experiencing a deficit in the desired parkland ratio, this does not indicate that existing facilities have reached capacity for use, and does not suggest that increased use associated with Project residents and employees would result in substantial physical deterioration of existing facilities. The Project would be subject to the state's Quimby Act, which requires development projects to set aside land, donate conservation easements, or pay in-lieu fees for park improvements. Per Ordinance No. 19-1927, the City's "Quimby Ordinance" was removed from the Carson Municipal Code and replaced by the City's IDIF Program (Ordinance 19-1931), which collects fees from new development and allocates a portion of the fees collected toward parks. Specifically, as it relates to the proposed elements of the Project, the IDIF Program has a specific amount allocated to parks (City of Carson 2021b). Payment of the City's IDIF would help offset incremental impacts to public parks and recreational facilities by helping to fund the acquisition and construction of new parkland, or maintenance and improvement of existing facilities, as needed.

With payment into the City's IDIF Program, population growth that would occur as a result of the Project is not anticipated to result in the overuse of existing parks such that the need for new or physically altered parks would be necessary. Therefore, impacts associated with park facilities would be **less than significant.**

Other public facilities?

Less-than-Significant Impact. Other public facilities in the City include facilities such as public libraries and the Carson Community Center. An increase in demand for both library services and other public facilities is generally associated with additional residential housing. The Project would include 988 new dwelling units, which could result in approximately 2,669 new residents. As previously discussed, the anticipated residential growth associated with the Project is within the projected population for the City and the region.

The Carson Community Center (also known as the Carson Event Center) is located in the Civic Center complex. The Community Center provides recreation programs, meeting rooms, and event space. It is anticipated that payment in the City's IDIF Program would offset any potential impacts to the Carson Community Center, and that the Project would not result in increased use of the center such that new or expanded facilities would be required.

The City is served by the County of Los Angeles Public Library system, and there are two library facilities located in Carson: the Carson Library and the Martin Luther King, Jr. Library. Under existing conditions, the community is underserved in terms of facility size and library materials (City of Carson 2002). The libraries could experience an increase in use due to the anticipated increase of approximately 2,669 residents. However, because the libraries in the City are part of a greater network of other County library services, residents and registered borrowers have access to the County's 7.5 million-volume book collection, as well as magazines, newspapers, government publications, and many specialized materials, including online databases (Los Angeles County Library 2020). The County's library system is made up of 86 libraries available to the public, and the increase in use on any one library is not anticipated to be substantial. Additionally, the County has established library facilities mitigation fee programs (Section 22.246.060 of the Los Angeles County Code) that require residential projects to remit payment pursuant to the County-wide program to account for library-related construction, improvements, and acquisition costs. The Project would be subject to applicable library facilities fees, pursuant to Section 22.246.060 of the Los Angeles County Code. Therefore, potential impacts to library facilities would be offset with payment of any applicable library mitigation fees and impacts to library facilities would be **less than significant**.

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?

Less-than-Significant Impact. As discussed above, the Project would provide opportunities for passive or active recreation on site, including common open space such as courtyards and paseos, and common resident amenities such as a swimming pool and dog park. Further, each residential unit would be provided with private open space such as balconies, terraces, and stoops for individual units. Additionally, the proposed pedestrian bridge would provide access to a proposed project north of the Project site, which would include 6.29 acres of publicly accessible open space and amenity areas. Thus, Project residents would have access to common open spaces and recreational amenities that would be provided as part of the Project. These on-site amenities would provide an alternative to off-site public parks and recreational facilities, allowing the Project's residents to recreate on the Project site while incrementally reducing potential impacts to off-site public parks and recreational facilities. Further, the population growth anticipated to occur as a result of the Project is within the population projections for the City. As such, the City's plans for the addition of parks and recreation facilities should be consistent with the demand of an increasing population.

The Project would pay its fair share into the City's IDIF Program (Ordinance 19-1931), which allocates a portion of the fees collected on new development toward parks. Payment of the City's IDIF would help offset incremental impacts to public parks and recreational facilities by helping to fund the acquisition and construction of new parkland, or maintenance and improvement of existing facilities. Despite the existing parkland deficit, according to the City's Existing Conditions Report, the City is currently prioritizing improvements to existing parks over park expansion or the acquisition of new park land (City of Carson 2018).

Through the provision of on-site recreational opportunities and the payment into the City's IDIF program, the Project would not 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. Therefore, impacts related to the increased use of park and recreational facilities would be **less than significant.**

Would the Project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Less-than-Significant Impact. The Project would include the construction or expansion of parks and other recreational facilities. The Project would include common spaces and recreational amenities that would be available to residents of the Project site, such as a pool, courtyards, and paseos, as well as private open spaces (e.g., balconies, terraces, and stoops) for individual units. The construction of these recreational facilities has been analyzed throughout this Draft EIR as part of the Project. As such, any potential environmental impacts related to these components, such as those described above, are already accounted for in this Draft EIR as part of the impact assessment conducted for the entirety of the Project. Additionally, the Project would be required to comply with all regulatory requirements and mitigation measures outlined within this Draft EIR for the purposes of lessening or mitigating impacts associated the construction of these recreational facilities. For example, as described in Chapter 4.8, Hydrology and Water Quality, Project construction would occur in accordance with the requirements of the National Pollutant Discharge Elimination System General Construction Permit and the Municipal Code, which require the implementation of best management practices and pollutant control measures to minimize pollutants and reduce runoff to levels that comply with applicable water quality standards. Therefore, no adverse physical effects beyond those already disclosed in this Draft EIR would occur as a result of construction of the Project's proposed recreational facilities. Therefore, impacts associated with the inclusion of park and recreational facilities would be **less than significant**.

Would the Project have cumulatively considerable impacts with regards to public services or recreation facilities?

A significant adverse cumulative impact related to public services or recreation facilities could occur if the service demands of the Project were to combine with those of related projects, triggering a need for new or physically altered public service facilities or recreation facilities, the development of which could cause significant environmental impacts. A significant adverse cumulative impact could also occur if the Project were to make a considerable contribution to a previously existing deficit in public services in the City.

The cumulative study area used to assess potential cumulative public services and recreation impacts includes the City of Carson, LACFD and LASD service areas, and the LAUSD service area. Cumulative impacts to public services, including fire and police protection, parks and recreation facilities, schools, and other public facilities, would result if projects collectively increase demand on services or facilities such that additional services or facilities must be constructed or provided. Cumulative projects would likely result in an incremental increase in the demand for fire protection, police protection, parks and recreation facilities, schools (for cumulative projects that have a residential component), and other public services.

Fire Protection

Less-than-Significant Impact. Cumulative growth within the County could result in a need for additional fire protection services to serve new development. Cumulative projects proposed, such as commercial, residential, or industrial projects, would require fire protection services from fire agencies within the region. There are six primary LACFD fire stations that provide fire and emergency medical services to the City, four of which are located within City boundaries. As explained and substantiated in Section 4.12.4, Impacts Analysis, the Project alone would not have a significant effect on fire protection services (meaning that the Project in-and-of-itself would not cause the need for new or physically altered government facilities in order to maintain acceptable levels of service).

Additionally, it is expected that related projects would incorporate similar design elements and operational practices consistent with the California Fire Code into their building design, such as sprinklers and fire alarms, and adequate emergency access, which would reduce each project's incremental effect on fire services by preventing emergencies and facilitating expedient access and response. Therefore, although cumulative impacts related to LACFD facilities may occur, the Project's contribution to any such impacts would not be considered cumulatively considerable, and impacts would be **less than significant**.

Police Protection

Less-than-Significant Impact. The increase in demand for law enforcement services from implementation of cumulative projects could have the potential to result in the need to construct or expand existing police facilities, which would have the potential to create an adverse impact on the environment. The Carson Sheriff's Station would serve the Project site and most of the related projects, which are located within the City and within the unincorporated community of West Carson. Although the majority of cumulative projects would require discretionary actions and would be required to demonstrate compliance with CEQA and/or the National Environmental Policy Act prior to project approval, they would incrementally increase the need for law enforcement services, which would have the potential to result in a significant cumulative impact.

Operational funding for the Sheriff's Department and the police departments serving cities in Los Angeles County is derived from various types of tax revenue, which are deposited in the County's General Fund. When staff and facilities are expanded to serve future development in the Project area and surrounding cities, any physical

expansion or alteration of facilities would be subject to environmental review. Therefore, although cumulative impacts related to LASD facilities may occur, the Project's contribution to any such impacts would not be considered cumulatively considerable, and impacts would be **less than significant**.

Schools

Less-than-Significant Impact. The increase in student population as a result of the Project and cumulative residential projects could require the construction or expansion of school facilities. However, as discussed in Section 4.12.4, under State law, development projects are required to pay established school impact fees in accordance with SB 50 at the time of building permit issuance, in addition to the fees collected by LAUSD and Compton Unified School District. As discussed in Section 4.12.2, Relevant Plans, Policies, and Ordinances, development impact fees collected in accordance with SB 50 are deemed "to provide full and complete school facilities mitigation." Therefore, the increase in demand for school facilities and services due to cumulative development would be adequately mitigated to a **less-than-significant** level by the payment of school impact fees.

Parks and Recreation

Less-than-Significant Impact. Buildout of the Project, along with cumulative projects, could increase use of existing local and regional parks and recreation facilities, and could result in the accelerated deterioration of recreational facilities. However, the deterioration that would occur to local parks and recreational facilities from regional population growth may be offset with funding from new development, such as in-lieu fees for parks or donation of parkland pursuant to the City's IDIF Program. Cumulative projects would be required to demonstrate compliance with CEQA and/or the National Environmental Policy Act prior to project approval, and existing federal, state, and local regulations related to parks and recreational facilities would mitigate potential adverse impacts to the environment that may result from the expansion of such facilities. It is assumed that the residential cumulative projects would include on-site private open space, as required by the Municipal Code, and at least some on-site recreation facilities, such as common open space. Therefore, the increase in population as a result of cumulative development would not result in a significant impact to parks and recreation facilities, and impacts would be **less than significant**.

Other Public Facilities

Less-than-Significant Impact. Future cumulative development would generate new tax revenue that would act as funding sources for other public facilities. Additionally, as discussed previously, the County has established library facilities mitigation fee programs to minimize potentially adverse effects to library facilities. Cumulative projects would be required to remit payment pursuant to the County-wide program to account for library-related construction, improvements, and acquisition costs. Related projects would be subject to applicable library facilities fees. Requiring payment of any applicable library facilities fees in effect would mitigate cumulative impacts on the County library system to a **less-than-significant** level, and, therefore, impacts would not be cumulatively considerable.

Payment of development fees by the Project and all related projects would offset the costs of increased service needs, and would ensure that performance objectives for fire, police, parks, recreation, and other public services would not be substantially affected by incremental increases in land use intensity within service areas. Due to the planning efforts for public services, required payment of requisite development fees, and compliance with modern performance standards, cumulative impacts would be **less than significant**.

4.12.5 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required.

4.12.6 Level of Significance After Mitigation

All impacts were determined to be less than significant. No mitigation is required.

4.12.7 References

CDE (California Department of Education). 2020. "Data Quest" [web search]. Accessed January 19, 2021. https://dq.cde.ca.gov/dataquest/page2.asp?level=School&subject=Enrollment&submit1=Submit.

City of Carson. 2002. *City of Carson General Plan Environmental Impact Report, Volume II*. Public Review Draft. Prepared by RBF Consulting. October 2002. Accessed January 19, 2021. http://ci.carson.ca.us /content/files/pdfs/planning/generalplan/EIR.pdf.

City of Carson. 2004. "General Plan." Accessed January 19, 2021. https://ci.carson.ca.us /communitydevelopment/generalplan.aspx.

City of Carson. 2018. *Existing Conditions Report*. Prepared by Dyett and Bhatia, with Fehr and Peers and Environmental Science Associates. January 2018 (Volume I) and May 2018 (Volume II). Accessed January 2022. https://static1.squarespace.com/static/5991f4e96a4963f2e46af74d/t /5cabb85dc83025d6b439f7af/1554757740866/Carson2040_ECR+Volume+2+Revised _05032018_compressed.pdf.

City of Carson. 2020. City-Wide Community Facilities District. February 19, 2020. Accessed August 18, 2021. https://ci.carson.ca.us/CommunityDevelopment/CFD.aspx

City of Carson. 2021a. "Parks and Recreation." Accessed September 15, 2021. http://ci.carson.ca.us /communityservices/Parks_Rec.aspx.

City of Carson. 2021b. Interim Development Impact Fees. July 1, 2021. Accessed August 13, 2021. https://ci.carson.ca.us/content/files/pdfs/planning/docs/projects/IDIFProgram /IDIFProgram-FeeTable_July%202021-June%202022.pdf.

County of Los Angeles. 2012. *Los Angeles County Operational Area Emergency Response Plan*. Adopted 1998; updated June 2012. Accessed January 19, 2021. https://ceo.lacounty.gov/wp-content/uploads /2019/12/OAERP-Approved-Adopted-Version-6-19-2012.pdf.

County of Los Angeles. 2014. *Final Environmental Impact Report: Los Angeles County General Plan Update*. Prepared by PlaceWorks. March 2015. Accessed January 19, 2021. https://planning.lacounty.gov /assets/upl/project/gp_2035_lac-gpu-final-eir-final.pdf.

County of Los Angeles. 2015. "General Plan 2035." Adopted October 6, 2015. Accessed January 19, 2021. http://planning.lacounty.gov/generalplan/generalplan.

County of Los Angeles. 2016. Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment. Department of Parks & Recreation. May 9, 2016. Accessed August 10, 2021. http://lacountyparkneeds.org/wp-content/uploads/2016/06/FinalReport.pdf.

DPR (Department of Parks and Recreation). 2020a. "Planning and Development." Accessed January 19, 2021. https://parks.lacounty.gov/planning-and-development/.

DPR. 2020b. "Full List of Parks." Accessed January 19, 2021. https://parks.lacounty.gov/park-overview/?row=2#fullListOfParksColumn.

LASD (Los Angeles County Sheriff's Department). 2013. LASD Patrol Divisions. May 7, 2013. Accessed January 19, 2021. http://shq.lasdnews.net/content/uoa/EPC/LASD_Jurisdiction.pdf.

LASD. 2019. "Carson Sheriff's Station." Accessed January 21, 2021. https://lasd.org/carson/.

LAUSD (Los Angeles Unified School District). 2015. "Los Angeles Unified School District: Board of Education District 7" [map]. June 9, 2015. Scale not given. https://achieve.lausd.net/site/handlers/filedownload.ashx?moduleinstanceid=22654&dataid=24425&FileName=BoardDistrict7.pdf.

LAUSD. 2019. "Resident School Identifier" [interactive map]. Accessed August 11, 2021. https://rsi.lausd.net/ResidentSchoolIdentifier/.

LAUSD. 2020. *2020 Developer Fee Justification Study: Los Angeles School District*. Schoolworks, Inc. March 2020. Accessed January 19, 2021. https://achieve.lausd.net/cms/lib/CA01000043/Centricity/Domain/921/LAUSD%20Dev%20Fee%20Study%202020_Final.pdf.

Los Angeles County Library. 2020. "About the Library." Accessed January 19, 2021. https://lacountylibrary.org/aboutus/.

4.13 Transportation

This section describes the existing transportation conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project). This section analyzes the potential impacts of the Project based on the California Environmental Quality Act (CEQA) Guidelines Section 15064.3(b), which focuses on newly adopted criteria (vehicle miles traveled [VMT]) for determining the significance of transportation impacts. Pursuant to Senate Bill (SB) 743, the focus of transportation analysis changed from level of service (LOS) or vehicle delay to VMT. The related updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. This new methodology was required to be used statewide beginning July 1, 2020. The City of Carson (City) is in the process of adopting local guidelines and VMT thresholds.

Comments received in response to the Notice of Preparation (Appendix A-2) included concerns regarding the California Department of Transportation (Caltrans) network screening process that indicated traffic safety analysis, impacts, and improvements may be required at the Interstate (I) 405 northbound on- and off-ramps at Avalon Boulevard, per Caltrans letter, February 23, 2021. Additional locations were also identified for freeway queuing analysis at I-405 and I-110 off-ramps near the Project site to determine if traffic safety impacts would occur per Caltrans Local Development Intergovernmental Review Safety Review Practitioner's Guidance December 18, Caltrans 2020. Some residents also expressed concern regarding increased vehicular traffic and the gated entry proposed along Grace Avenue (Appendix A-2).

The section is based on the CEQA analysis included in the Imperial Avalon Transportation Impact Study August 13, 2021, prepared by Fehr & Peers. The Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018) and interim City guidance based on discussions with City staff was used in the Project's CEQA analysis. The non-CEQA analysis (i.e., LOS effects) is included in the Imperial Avalon Local Transportation Assessment (LTA), July 16, 2021 prepared by Fehr & Peers. The transportation studies are included as Appendix I and Appendix K of this EIR. Other sources consulted are listed in Section 4.13.7, References.

4.13.1 Relevant Plans, Policies, and Ordinances

State

Senate Bill 743

On September 27, 2013, Governor Brown signed SB 743, which became effective on January 1, 2014. SB 743 streamlines the review under the CEQA process for several categories of development projects, including the development of infill projects in transit priority areas to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions. SB 743 adds Chapter 2.7: Modernization of Transportation Analysis for Transit Oriented Infill Projects to the CEQA Statute (PRC Section 21099). Section 21099(d)(1) provides that aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment. In addition, SB 743 mandates that alternative metric(s) for determining impacts relative to transportation shall be developed to replace the use of LOS in CEQA documents.

In the past, environmental review of transportation impacts focused on the delay that vehicles experience at intersections and on roadway segments, often measured using LOS. Mitigation for impacts on vehicular delay often involves increasing capacity such as widening a roadway or the size of an intersection, which in turn encourages more vehicular travel and greater pollutant emissions. Additionally, improvements to increase vehicular capacity can often discourage alternative forms of transportation such as biking and walking. SB 743 directed OPR to develop an alternative metric(s) for analyzing transportation impacts in CEQA documents. The alternative shall promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, promote the development of multimodal transportation system, and provide clean, efficient access to destinations. Under SB 743, it was anticipated that the focus of transportation analysis will shift from vehicle delay to VMT within transit-priority areas (i.e., areas well served by transit).

Pursuant to SB 743, OPR released the draft revised CEQA Guidelines in November 2017, recommending the use of VMT for analyzing transportation impacts for all projects. Additionally, OPR released Updates to Technical Advisory on Evaluating Transportation Impacts in CEQA to provide guidance on VMT analysis. In this Technical Advisory, OPR provides its recommendations to assist lead agencies in screening out projects from VMT analysis and selecting a significance threshold that may be appropriate for their particular jurisdictions. While OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence" (14 CCR 15064.7[c]).

In December 2018, the CEQA Guidelines were updated to add new Section 15064.3, Determining the Significance of Transportation Impacts, that describes specific considerations for evaluating a project's transportation impacts using the VMT methodology.

CEQA Guidelines Section 15064.3(b) is divided into four subdivisions, as follows:

1. **Land Use Projects.** Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
2. **Transportation Projects.** Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.
3. **Qualitative Analysis.** If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
4. **Methodology.** A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles

> traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.

OPR's regulatory text indicated that a public agency may immediately commence implementation of the new transportation impact guidelines, and that the guidelines must be implemented statewide by July 1, 2020. However, the OPR Technical Advisory allows local agencies to retain their congestion-based LOS standards in general plans and for project planning purposes.

Therefore, this Draft Environmental Impact Report (EIR) relies on VMT as the basis for evaluating transportation impacts under CEQA. The Project's LOS effects have been documented in the LTA prepared by Fehr & Peers for the proposed Project.

California Department of Transportation

As the owner and operator of the State Highway System, Caltrans, implements established state planning priorities in all functional plans, programs, and activities. Caltrans has the responsibility to coordinate and consult with local jurisdictions when proposed local land use planning and development may impact state highway facilities. To comply with SB 743 implementation, the Caltrans Transportation Impact Study Guide (May 2020), replaced the Guide for the Preparation of Traffic Impact Studies (Caltrans 2002). Per the 2020 Transportation Impact Study Guide, Caltrans' primary review focus is VMT, replacing LOS as the metric used in CEQA transportation analyses. Caltrans recommends use of OPR's recommended thresholds and guidance on methods of VMT assessment found in OPR's Technical Advisory (OPR 2018). In addition to VMT, Caltrans has developed an Interim Land Development and Intergovernmental Review Safety Review Practitioners Guidance (July 2020) which may request a targeted operational and safety analysis to address a specific geometric or operational issue related to the State Highway System and connections with the State Highway System (Caltrans 2020).

To comply with this requirement and respond to Caltrans comment letter requesting additional analysis, an assessment of on- and off-ramp queuing at freeway ramps serving the Project has been included in the EIR.

Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (also known as the Connect SoCal Plan) was made available in March 2020 and presents the land use and transportation vision for the region through 2045, providing a long-term investment framework for addressing the region's challenges (SCAG 2020). Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The SCAG RTP/SCS lays the framework for sustainable development in the SCAG region, which includes the City of Carson. Priorities of the plan include increasing investment in transit and investing in transportation strategies and projects that will result in improved air quality, public health, and reduced greenhouse gas emissions. The Proposed Final Connect SoCal Plan was adopted by SCAG's Regional Council on September 3, 2020.

Local

General Plan

Transportation and Infrastructure Element

The purpose of the Transportation and Infrastructure Element is to document the methods and results of the analysis of the existing and projected future circulation conditions in the City of Carson. As part of the General Plan, the document outlines Transportation and Infrastructure System policies and describes the future circulation system needed to support the Land Use Element. In addition, the Transportation and Infrastructure Element addresses public utilities and infrastructure.

The Transportation and Infrastructure Element of the General Plan provides the following goals potentially relevant to the Project:

Goal: TI-1: Minimize impacts associated with truck traffic through the City, as well as the truck parking locations.

Goal: TI-2: Provide a sustainable, safe, convenient and cost-effective circulation system to serve the present and future transportation needs of the Carson community.

Goal: TI-3: Minimize intrusion of commuter traffic on local streets through residential neighborhoods.

Goal: TI-4: Increase the use of alternate forms of transportation generated in, and traveling through, the City of Carson.

Goal: TI-5: Use Transportation Demand Management (TDM) measures throughout the City, where appropriate, to discourage the single-occupant vehicle, particularly during the peak hours. In addition, ensure that any developments that are approved based on TDM plans incorporate monitoring and enforcement of TDM targets as part of those plans.

Goal: TI-6: Cooperate to the fullest extent possible with Federal, State, County and regional planning agencies responsible for maintaining and implementing circulation standards to ensure orderly and consistent development of the entire South Bay region

Goal: TI-7: Provide improved aesthetic enhancements to and maintenance of the City's transportation corridors.

Goal: TI-9: Promote sustainable energy, communication, and other systems which meet the needs of the community.

Master Plan for Bikeways

The Carson Master Plan of Bikeways lays out a strategic vision for enhancing bicycle transportation in the City. This plan is the guiding document for all bicycle infrastructure, policies, and programs in Carson (City of Carson 2013). The Carson Master Plan of Bikeways provides the following goals potentially relevant to the Project:

Goal: 1: Create a physical environment where people of all ages and physical abilities feel safe and comfortable bicycling throughout Carson for everyday purposes.

Goal: 2: Make bicycling the most attractive transportation choice for short trips.

Goal: 3: Increase safety for all road users.

Goal: 4: Increase economic vitality by making Carson a more livable city.

4.13.2 Existing Conditions

This section includes the baseline VMT for projects in the City of Carson using the 2016 RTP/SCS SCAG model. It also provides a summary of the existing circulation network, the existing public transit service, and existing bicycle and pedestrian facilities within the Project's LTA study area.[1]

The Project site is located in the City of Carson, bounded by Avalon Boulevard to the east, the I-405/213th Street interchange to the north, Grace Avenue to the west, and single-family/commercial development to the south, which abuts East 213th Street.

4.13.2.1 Baseline VMT

The Updated CEQA Guidelines state that "generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts," and define VMT as "the amount and distance of automobile travel attributable to a project." "Automobile" refers to on-road passenger vehicles, specifically cars and light trucks. OPR has clarified in its Technical Advisory (OPR 2018) that heavy-duty truck VMT is not required to be included in the estimation of a project's VMT. Other relevant considerations may include the effects of a project on transit and non-motorized traveled.

The SCAG 2016 Regional Travel Demand trip-based model is a travel demand model with socioeconomic and transportation network inputs, such as population, employment, and the regional and local roadway network. The SCAG 2016 RTP/SCS is the most current version of the model that is available to traffic consultants to forecast trips and VMT for projects within the SCAG region. The model outputs several travel behavior metrics, such as vehicle trips and trip lengths, that can be used to calculate VMT. The SCAG RTP/SCS trip-based model was used to estimate the baseline VMT for the City. The 2016 SCAG model has 2012 as the base year and 2040 as the forecast year).

This baseline VMT methodology includes vehicle trips within the SCAG model to generate the following metrics:

- Home-based VMT per capita: Home-based vehicle trips are traced back to the residence of the trip-maker (non-home-based trips are excluded) and then divided by the residential population within the geographic area. This metric is used to estimate VMT for residential land uses.

As shown in Table 4.13-1, the City's baseline for home-based VMT per capita for residential uses is 14.40.

Table 4.13-1. Baseline Vehicle Miles Traveled for City of Carson

VMT Metrics	2016 Citywide Average	15% Below Citywide Average
Home-Based VMT per Capita	14.40	12.24

Source: Appendix K
Note: VMT = vehicle miles traveled

[1] A traffic study scoping agreement was reviewed and approved by the City of Carson staff prior to the preparation of the Project's Local Transportation Assessment (LTA) and Transportation Impact Study. The traffic study scoping agreement provided an outline of the Project's study area, trip generation, trip distribution, and analysis methodology. This agreement is included in the Project's LTA included in Appendix K.

4.13.2.2 Existing Circulation Network

Freeways

Interstate 710: This freeway runs in a north/south direction, extending from the City of Long Beach to just north of I-10 near the City of Alhambra. Near the study area, the freeway provides four lanes in each direction and has an interchange with I-405. The closest ramps to access I-710 are located along Del Amo Boulevard.

Interstate 405: This freeway runs in a northwest/southeast direction in the study area, extending from I-5 in the City of Irvine to the San Fernando Valley in the City of Los Angeles. In the study area, the freeway provides four lanes and one carpool lane in each direction plus auxiliary lanes. Ramps are provided at Carson Street, Avalon Boulevard, and Main Street.

Interstate 110: This freeway runs in the north/south direction, extending from the San Pedro community in the City of Los Angeles to Downtown Los Angeles. In the study area, the Harbor Freeway provides four lanes in each direction plus auxiliary lanes. Ramps are provided at Carson Street and 220th Street.

State Route 91: This freeway runs in the east/west direction, extending from the Harbor Gateway in the City of Los Angeles to the City of Riverside in the Inland Empire. In the study area, the freeway provides five lanes in each direction (including one carpool lane in the eastbound direction) plus auxiliary lanes. Ramps are provided at Avalon Boulevard and Central Avenue.

Local Roadways

Del Amo Boulevard: This roadway is classified as a Major Highway in the City of Carson's General Plan, Transportation and Infrastructure Element and runs in the east/west direction north of the Project site with three travel lanes in each direction within the Project study area. Left-turn pockets are present at major intersections.

213th Street: This roadway is designated as a Collector and runs in the east/west direction south of the Project site with one travel lane in each direction. Parking is permitted on both sides of the street.

Carson Street: This roadway is classified as a Major Highway and runs in the east/west direction south of the Project site with two travel lanes in each direction through most of the study area. Parking is generally permitted on both sides of the street and left-turn pockets are present at major intersections. Carson Street from Figueroa Street to the I-405 interchange was recently renovated as part of the Carson Street Mixed-Use District Master Plan, adding pedestrian enhancements including curb extensions and high-visibility crosswalks.

Main Street: This roadway is classified as a Major Highway and runs in the north/south direction west of the Project site with two travel lanes in each direction with a center turn lane present in some parts of the street. Parking is generally permitted on both sides of the street and left-turn pockets are present at major intersections.

Grace Avenue: This roadway is designated as a Collector Street and runs in the north/south direction west of the Project site with one travel lane in each direction. Parking is permitted on both sides of the street.

Avalon Boulevard: This roadway is classified as a Major Highway and runs in the north/south direction east of the Project site with three travel lanes in each direction. Parking is not permitted on the blocks adjacent to the Project site. Left-turn pockets are present at major intersections.

Intersections

The Project's LTA includes 33 existing intersections as shown in Figure 4.13-1, Study Area Intersections, and listed in Table 4.13-2, Study Area Intersections. The intersections are primarily located along Avalon Boulevard, South Main Street, West Carson Street, and Grace Avenue.

The study area selected for analysis in the LTA is bounded by State Route 91 to the north, the Harbor Freeway (I-110) to the west, the I-405 interchange with Carson Street to the east, and 223rd Street to the south. The streets in the study area are under the jurisdiction of the City of Carson, except for all freeway ramp terminal intersections which are controlled by Caltrans.

Table 4.13-2. Study Area Intersections

ID	Intersection Location	Signalized/Unsignalized
1	Avalon Boulevard and Artesia Boulevard/SR-91 Westbound Ramps	S
2	Central Avenue and Artesia Boulevard/SR-91 Westbound Ramps	S
3	Avalon Boulevard and Albertoni Street/SR-91 Eastbound Ramps	S
4	Central Avenue and Albertoni Street/SR-91 Eastbound Ramps	S
5	Avalon Boulevard and Victoria Street	S
6	Main Street & Martin Luther King Jr. Street	S
7	Avalon Boulevard and Martin Luther King Jr. Street	S
8	Main Street and I-405 Northbound Off-Ramp	S
9	Main Street and I-405 Southbound On-Ramp	S
10	Main Street and Del Amo Boulevard	S
11	Avalon Boulevard and Del Amo Boulevard	S
12	Central Avenue and Del Amo Boulevard	S
13	Main Street and Torrance Boulevard	S
14	Avalon Boulevard and I-405 Northbound Ramps	S
15	Avalon Boulevard and I-405 Southbound Ramps	S
16	Avalon Boulevard and Main Project Driveway	S
17	Avalon Boulevard and Secondary Project Driveway	U
18	Grace Avenue and Northern Secondary Driveway	U
19	Grace Avenue and Southern Secondary Project Driveway	U
20	Main Street and 213th Street	S
21	Grace Avenue and 213th Street	U
22	Avalon Boulevard and 213th Street	S
23	Wilmington Avenue and 213th Street	S
24	I-110 Southbound Ramps and Carson Street	S
25	Figueroa Street and Carson Street	S
26	Main Street and Carson Street	S
27	Grace Avenue and Carson Street	S
28	Avalon Boulevard and Carson Street	S
29	I-405 Southbound Ramps and Carson Street	S
30	I-405 Northbound Ramps and Carson Street	S
31	Figueroa Street and 220th Street/I-110 Northbound Ramps	S
32	Avalon Boulevard and 220th Street	S
33	Avalon Boulevard and 223rd Street	S

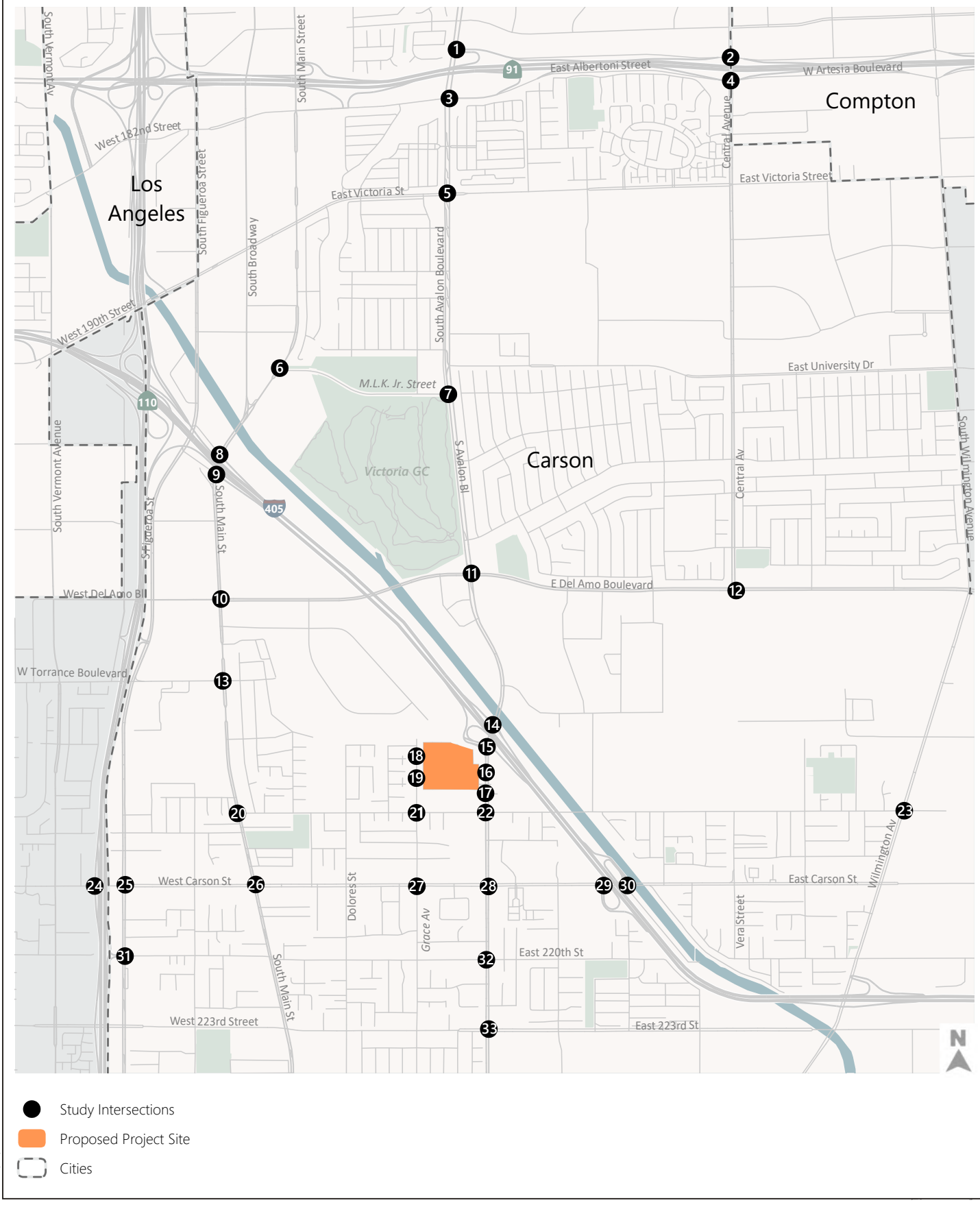
Source: Appendix I
Notes: I = Interstate; S = Signalized; SR = State Route; U = Unsignalized

Existing Public Transit Service

The Project site is served by a handful of public transit routes, although no routes with peak period frequency of 15 minutes or less directly serve the Project. Figure 4.13-2, Public Transit Service, shows the various municipal bus routes, rapid bus routes, and circulators providing service in the study area. Two local Metro (Routes 45, 246), the Metro Silver Line, two Torrance Transit (3, R3), all Carson Circuit, and one Commuter Express (448) bus routes provide service within the study area. The nearest bus stop is located approximately 100 feet north of the Avalon Boulevard/213th Street intersection (for Route 246) and is approximately 0.3 miles from the Project. An additional bus route within the area is also planned for this area in coordination with Long Beach Transit.

Existing Bicycle and Pedestrian Facilities

The study area has a limited existing bikeway network which includes Class II bike lanes in each direction on Del Amo Boulevard east of Avalon Boulevard, and on Avalon Boulevard between Del Amo Boulevard and University Drive. Carson Street is now designated as a Class III bike route as part of the recent street renovation. The study area generally has a network of 4- to 8-foot sidewalks, but does not have crosswalks on all intersection legs, and countdown pedestrian signals at all marked crossings. Figure 4.13-3, Existing and Proposed Bicycle Facilities, shows existing and proposed bicycle facilities in the study area. There are several bike lanes and bike routes planned throughout the study area and an extension of the bike path along the Dominguez Channel, east of I-405. The planned District at South Bay development adjacent to the Project site will include a Class II bike lane and a Class I bike path on its internal roadway network. Data on the proposed facilities come from two sources, the City of Carson Master Plan of Bikeways and Metro's Active Transportation Strategic Plan.



SOURCE: Fehr & Peers 2021

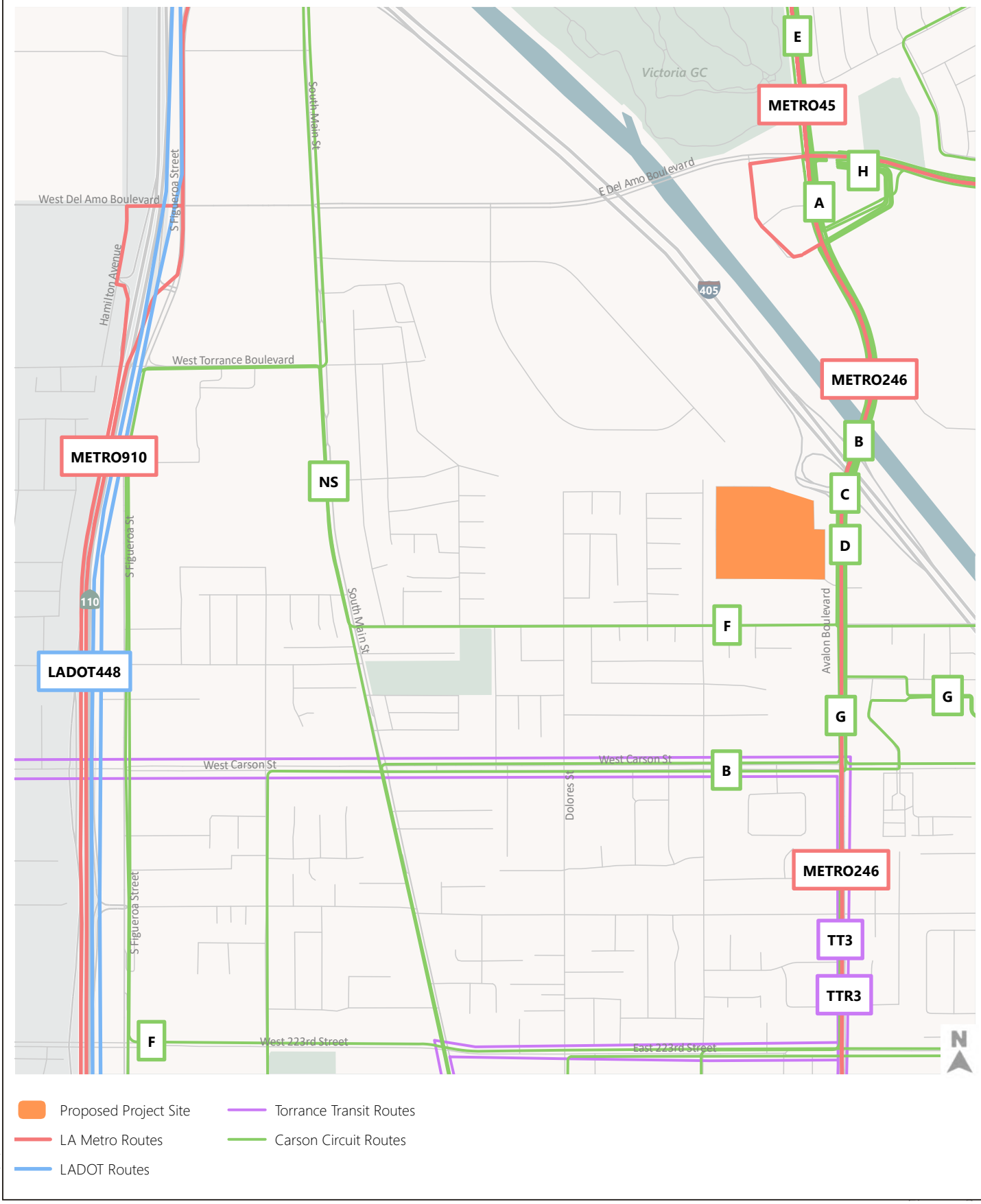
FIGURE 4.13-1

Study Area Intersections

Imperial Avalon Mixed-Use Project

DUDEK

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SOURCE: Fehr & Peers 2021

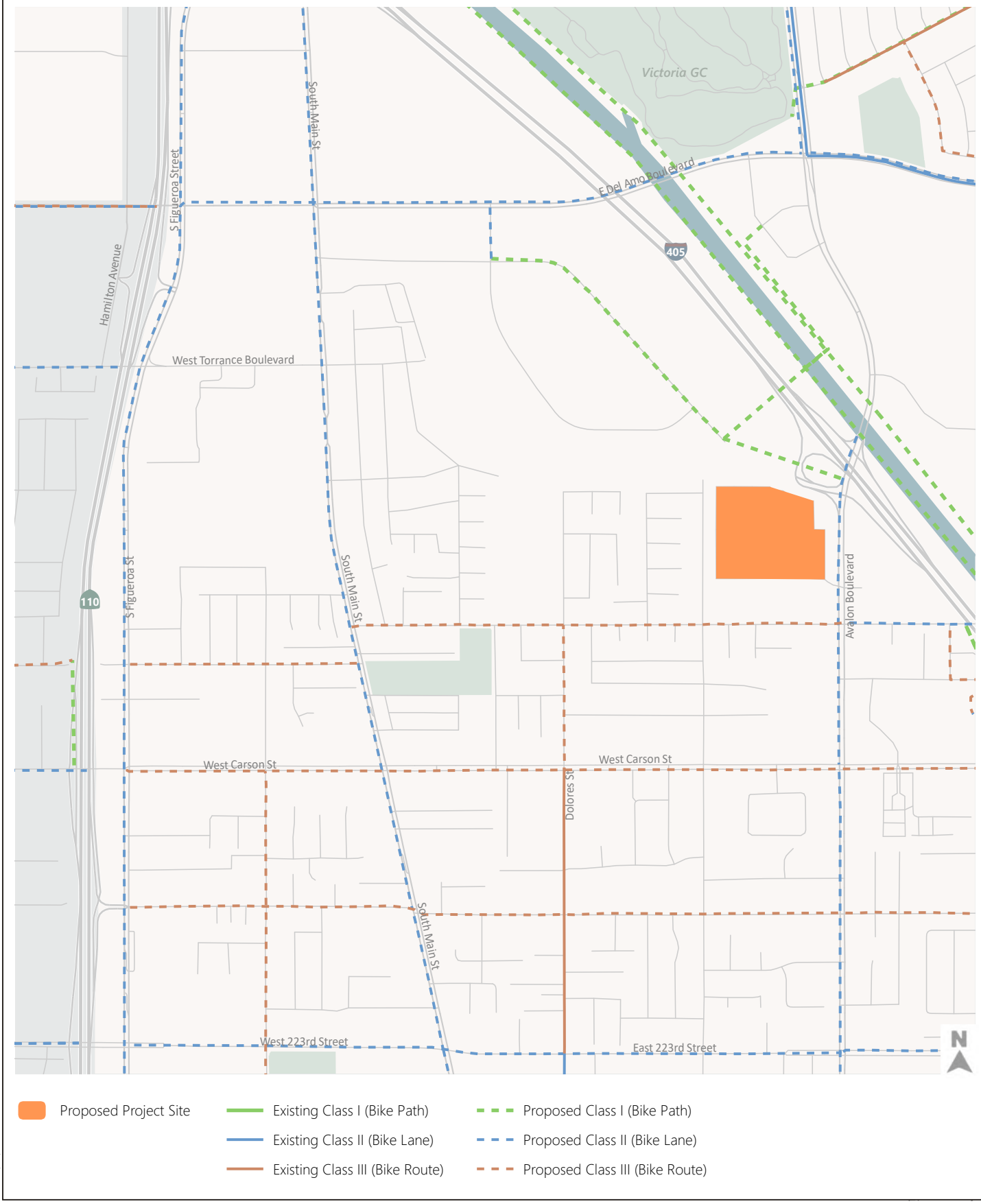
FIGURE 4.13-2

Public Transit Service

Imperial Avalon Mixed-Use Project

DUDEK

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SOURCE: Fehr & Peers 2021

FIGURE 4.13-3

Existing and Proposed Bicycle Facilities

Imperial Avalon Mixed-Use Project

DUDEK

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4.13.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to transportation are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to transportation would occur if the Project would:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
2. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.
5. Result in cumulatively considerable transportation impacts.

Methodology

Program, Plan, Ordinance and Policy

The programs, plans, ordinance, and policies listed in Section 4.13.2, Existing Conditions, were analyzed for their applicability to the proposed Project under Threshold 1.

Vehicle Miles Traveled

The OPR technical advisory describes the four components of a VMT analysis necessary to comply with the new CEQA guidelines:

1. **VMT Screening & Qualitative Review:** The first step is to determine when a VMT analysis is required. OPR recommends that projects be screened from a VMT analysis based on their size, location, and/or accessibility to transit.
2. **VMT Analysis Methodology:** If a project is not screened from requiring a VMT analysis, the City can use the regional travel demand model to estimate a project's VMT. OPR recommends that VMT be reported as "Home-Based VMT" per capita for residential projects and "Home-Based Work VMT" per employee for the employees of a project site. Home-Based VMT includes all vehicle round trips originating from the residence of the trip-maker. Home-Based Work VMT includes only vehicle roundtrips between the residence of the trip-maker and their place of work.
3. **VMT Impact Thresholds:** The City has discretion to develop and adopt its own VMT thresholds, or rely on thresholds recommended by other agencies, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence. OPR recommends that projects with VMT exceeding 15% below existing VMT per capita or per employee when compared to a regional or citywide average of these metrics may indicate project impacts. Fehr & Peers recommends using citywide average VMT to determine the thresholds for this analysis, consistent with recent VMT analyses conducted for nearby developments and the City's General Plan Update.
4. **VMT Mitigation:** The types of mitigation that affect VMT are those that reduce the number of single-occupant vehicles generated by a project. Mitigation can be accomplished by altering the proposed land uses or by implementing Transportation Demand Management (TDM) measures.

The City has yet to formally adopt its own VMT analysis guidelines and impact thresholds. Therefore, for the purposes of this VMT analysis, the impact threshold recommended by OPR in a Technical Advisory on Evaluating Transportation Impacts in CEQA has been used (OPR 2018).

Consistent with OPR's Technical Advisory, projects that meet certain screening thresholds based on their size, location and land use may be presumed to result in a less than significant transportation impact. For example, projects located within a Transit Priority Area or a low VMT-generating Traffic Analysis Zone (TAZ) (subject to additional secondary screening criteria) and absent substantial evidence to the contrary are anticipated to result in a less than significant impact.

Following the standard OPR guidance, a threshold of 15% below baseline VMT, is used to determine if the Project will cause significant transportation impacts. If the Project generates VMT higher than this threshold, then it is expected to have a significant impact. If the Project generates VMT lower than this threshold, then it is expected to not have a significant impact.

Hazardous Features (Queuing and Safety Analysis per Caltrans)

Based on the Interim Local Development Intergovernmental Review Safety Review Practitioners Guide (December 2020), Caltrans requires an assessment of potential safety impacts to Caltrans facilities caused by the addition of project vehicle trips. The following locations were assessed for potential safety impacts:

- I-405/Avalon Boulevard Interchange
  - I-405 northbound (NB) off-ramp to Avalon Boulevard
  - I-405 southbound off-ramp to Avalon Boulevard[2]
  - Northbound left (NBL) turn pocket from Avalon Boulevard to I-405 NB on-ramp
  - NB Avalon Boulevard approach to I-405 southbound on-ramp
- I-110/220th Street Interchange
  - I-110 NB off-ramp to 220th Street
  - NBL turn pocket from Figueroa Street to I-110 NB on-ramp

For the off-ramp locations, a potentially significant safety impact is identified if the addition of Project vehicle trips would result in an off-ramp queue that extends onto the freeway mainline. An off-ramp queue which extends onto the freeway mainline causes a potential safety concern if a significant speed differential exists between the off-ramp queue vehicles and the freeway mainline vehicles.

For the on-ramp locations, Caltrans has not identified a set of criteria for evaluating potential significant safety impacts. In lieu of such guidance, collision data at these locations from the previous 5 years and turn pocket queue lengths with the addition of project vehicle trips were summarized. Connections, if any, between the collision data, turn pocket queue lengths and the addition of project vehicle trips causing potential safety concerns were identified to determine the Project's impact on safety at these intersections.

[2] The I-405 southbound off-ramp and Avalon Boulevard interchange was reconfigured but is closed to traffic to the District at South Bay project for the time being. This analysis considers the current traffic signal configuration at the I-405 southbound off-ramp and Avalon Boulevard intersection for the Existing and Existing plus Project scenarios and the future traffic signal configuration at the I-405 Southbound Off-Ramp & New Internal District at South Bay Road (tentatively called Lenardo Drive) intersection for the Future (Year 2027) Base and Future (Year 2027) plus Project scenarios.

Emergency Access

The emergency access analysis evaluates whether the Project would comply with the City's emergency access and/or evacuation requirements including those imposed by the Fire Department.

Project Trip Generation

Trip generation estimates used in the Project's LTA are based on daily and AM and PM peak hour trip generation rates and fitted curve equations obtained from the Institute of Transportation Engineers Trip Generation Manual 10th Editions (ITE 2017). While trip generation is not used in the EIR for the purpose of determining impacts based on traffic delay or congestion, it is helpful in assessing issues such as access and traffic hazards. Trip generation also plays an important role in evaluating mobile emissions and noise impacts. The Institute of Transportation Engineers–based daily trip estimates used in the Project's LTA is shown in the Appendix I of this EIR.

The daily residential vehicle trips used in the VMT analysis summarized in this section is lower than the daily residential vehicle trips utilized for the Project's LTA and other CEQA impact analyses, such as air quality, greenhouse gas emissions, energy, and noise. The Institute of Transportation Engineers–based daily trip estimates are intended to be conservative to represent a worst-case scenario for assessing potential impacts to air quality, greenhouse gas emissions, energy, and noise. The VMT analysis, which requires running the 2016 RTP/SCS SCAG model, must use the same methodology for deriving Project trip generation as was used to calculate the VMT threshold of significance, which in this case is the citywide average home-based VMT per capita from the 2016 RTP/SCS SCAG model. Therefore, to be consistent with requirements of VMT estimation per OPR recommendations, the VMT analysis for this Project uses the SCAG model derived trip generation.

Project Design Features

The Project would involve the implementation of a Transportation Demand Management (TDM) Plan which includes a number of parking and transportation demand management strategies to encourage the use of active transportation modes, such as walking, biking, carpooling, and taking transit. While this PDF is a part of the Project, it has conservatively not been accounted for in the analysis below.

PDF-TRA-1 **Transportation Demand Management Plan**: The Project includes residential and restaurant components. This allows for the internal capture of some Project trips, as described in Chapter 3. For example, residents of the Project can walk to the Project's restaurant uses, instead of driving.

Senior Housing Shuttle: When the Project's senior housing component is constructed, a regularly scheduled shuttle service would be provided for senior residents to access shopping and services in the surrounding area. The shuttles will transport groups of senior residents for each trip. Thus, this service can potentially reduce the need for single-occupant vehicle trips to and from the Project site.

Unbundled Parking: The monthly rent expense allocated to parking will be "unbundled" as a separate, optional line item for residents of the Project's apartment units. Unbundling the expense of parking allows tenants to more consciously weigh the costs and benefits of purchasing additional parking spaces and incentivizes reducing overall vehicle occupancy.

Car Sharing Program: The Project will include designated parking spaces for car sharing vehicles. Car sharing programs allow greater flexibility for residents who do not own a vehicle but may occasionally require a vehicle for some trips, such as: recreational activities, visiting family and friends in suburban/rural locations, etc.

Workstation Areas: The Project's amenity spaces for residents will include workstation areas to facilitate telecommuting. Each resident telecommuter can potentially reduce daily single-occupant vehicle trips, especially peak hour trips.

PDF-TRA-2 **Grace Avenue/213th Street Signalization:** The Project applicant will signalize the currently stop-controlled Grace Avenue/213th Street intersection.

4.13.4 Impacts Analysis

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

Less-than-Significant Impact. The Project would be consistent with the 2020–2045 RTP/SCS also analyzed in Table 4.9-1, Consistency with 2020–2045 RTP/SCS Goals, in Section 4.9, Land Use and Planning. The Project's consistency with the applicable goals and policies of the General Plan Transportation and Infrastructure Element is provided in Table 4.9-2, Project's Consistency with Applicable City of Carson General Plan Policies, in Section 4.9, Land Use and Planning. As determined in these discussions, the Project is consistent with the General Plan Transportation and Infrastructure Element and the Applicable City of Carson General Plan Policies.

As discussed in Section 4.13.1, although there is a limited existing bike network there are several bike lanes and bike routes planned throughout the Project as well as the planned District at South Bay development adjacent to the Project site will include a Class II bike lane and a Class I bike path on its internal roadway network. The Project would not conflict with any applicable General Plan and Master Bikeway Plan policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Impacts would be **less than significant**.

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

Less-than-Significant Impact. As shown in the following analysis, the Project is estimated to generate VMT per capita of less than 15% below the citywide average for this metric. All commercial uses included in the Project are each less than 50,000 square feet and therefore identified as local serving and screened from further analysis. The Project would be consistent with CEQA Guidelines Section 15064.3(b) and therefore, impacts would be **less than significant**.

Vehicle Miles Traveled Screening

VMT is heavily dependent on the land uses and location of a project. Therefore, OPR has provided guidance related to several opportunities for screening projects that would generate low VMT.

Project Type Screening

Projects that generate less than 110 daily trips may be screened from conducting a VMT analysis. Local serving commercial uses less than 50,000 square feet may also be presumed to have a less-than-significant VMT impact. All the Project's commercial uses are less than 50,000 square feet. Therefore, the commercial component of the Project is identified as local serving and screened from VMT analysis.

Low Vehicle Miles Traveled Area Screening

The SCAG Regional Travel Demand Model, which includes Los Angeles County and the City of Carson, is the most appropriate model to use for VMT forecasting within the City. This analysis used the SCAG model to measure the VMT performance for the Project's TAZ during Base Year 2016 (the most recently adopted SCAG base year) conditions. TAZs are geographic polygons similar to Census block groups used to represent areas of homogenous travel behavior. Figure 4.13-4, 2016 RTP/SCS SCAG Model Tier 2 Transportation Analysis Zones, shows the Project's TAZ. The VMT metrics for the Project's TAZ are discussed in further detail below as part of the screening for residential land uses.

Low VMT areas for residential projects are defined as TAZs that generate VMT on a per capita basis that is at least 15% lower than the citywide average. Low VMT areas for office projects are defined as TAZs that generate VMT on a per employee basis that is at least 15% lower than the citywide average. The Project's TAZ is estimated to generate VMT per capita greater than 15% below the City's baseline VMT. Therefore, the Project is not in an area with low residential VMT, which means the residential component of the Project cannot be screened out of a VMT analysis.

Transit Priority Area Screening

Projects located within one-half mile of either an existing major transit stop[3] or a stop along an existing high-quality transit corridor[4] may also be exempt from VMT analysis. The closest major transit stops to the Project are along the LA Metro Silver Line bus rapid transit route. However, the Project is more than 1 mile away from the closest Silver Line stop at the I-110/Carson Street interchange. Also, there are no high-quality transit corridors near the Project. Therefore, the Project is not within a Transit Priority Area and cannot be screened out of a VMT analysis under this screening threshold.

Vehicle Miles Traveled Analysis and Impact Conclusion

Based on the screening criteria recommended by OPR of local serving retail that is less than 50,000 square feet, only the commercial component (i.e., restaurants and a café) of the Project is exempt from VMT analysis. For projects consisting of residential, office, and commercial land uses, the VMT analysis can be conducted using the SCAG model. The SCAG 2016 Regional Travel Demand Model was used to collect data and perform the VMT analysis for this study. In order to estimate the VMT generated by the Project, the Average Person Trip Rates, the Average Person Trip Rate to Vehicle Trips Conversion, and the Estimated trip length were determined.

The SCAG model was used to estimate average person trip rates for the residential component of the Project. The home-based production person trip rate per resident was determined to be 1.7 for the City using this method, which converted to 3,368 daily residential vehicle trips.[5] The trip lengths for the Project were estimated using data from

[3] California Public Resources Code, Section 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").

[4] California Public Resources Code, Section 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").

[5] As discussed under the "Project Trip Generation" subheading within Section 4.13.3, Thresholds of Significance, the daily residential vehicle trips used in the VMT analysis are lower than the daily residential vehicle trips used for the Project's Local Transportation Assessment and other CEQA impact analyses, such as air quality, greenhouse gas emissions, energy, and noise. The ITE-based daily trip estimates are intended to be conservative to represent a worst-case scenario for assessing potential impacts to air quality, greenhouse gas emissions, energy, and noise. The VMT analysis, which requires running the 2016 RTP/SCS SCAG model, must use the same methodology for deriving Project trip generation as was used to calculate the VMT threshold of significance, which in this case is the citywide average home-based VMT per capita from the 2016 RTP/SCS SCAG model. Therefore, to be consistent with requirements of VMT estimation per OPR recommendations, the VMT analysis for this Project uses the SCAG model derived trip generation.

the SCAG model. The SCAG model can produce average trip lengths for each TAZ in the City. For the TAZ including the Project site, the average trip length for home-based production trips is 9.1 miles.

The final step to calculate VMT is to multiply the number of vehicle trips by the average trip length for those trips. The total VMT for the Project's residential uses is projected to be 30,649. The residential VMT is then divided by the 3,042 total residents to obtain a VMT per capita of 10.1. The results of the VMT analysis are shown in Table 4.13-3.

Table 4.13-3. Project VMT Calculation

Land Use	Population	Mode Split (SOV)	Mode Spilt (HOV)	AVO	Person Trip Rate	Trip Length (miles)	Daily Person Trips	Daily Vehicle Trips	VMT	Home-Based VMT per Capita
Residential	3,042	47%	45%	2.5	1.7	9.1	5,172	3,368	30,649	10.1

Source: Appendix K
Notes: SOV = single-occupancy vehicle; HOV = high-occupancy vehicle; AVO = average vehicle occupancy; VMT = vehicle miles traveled

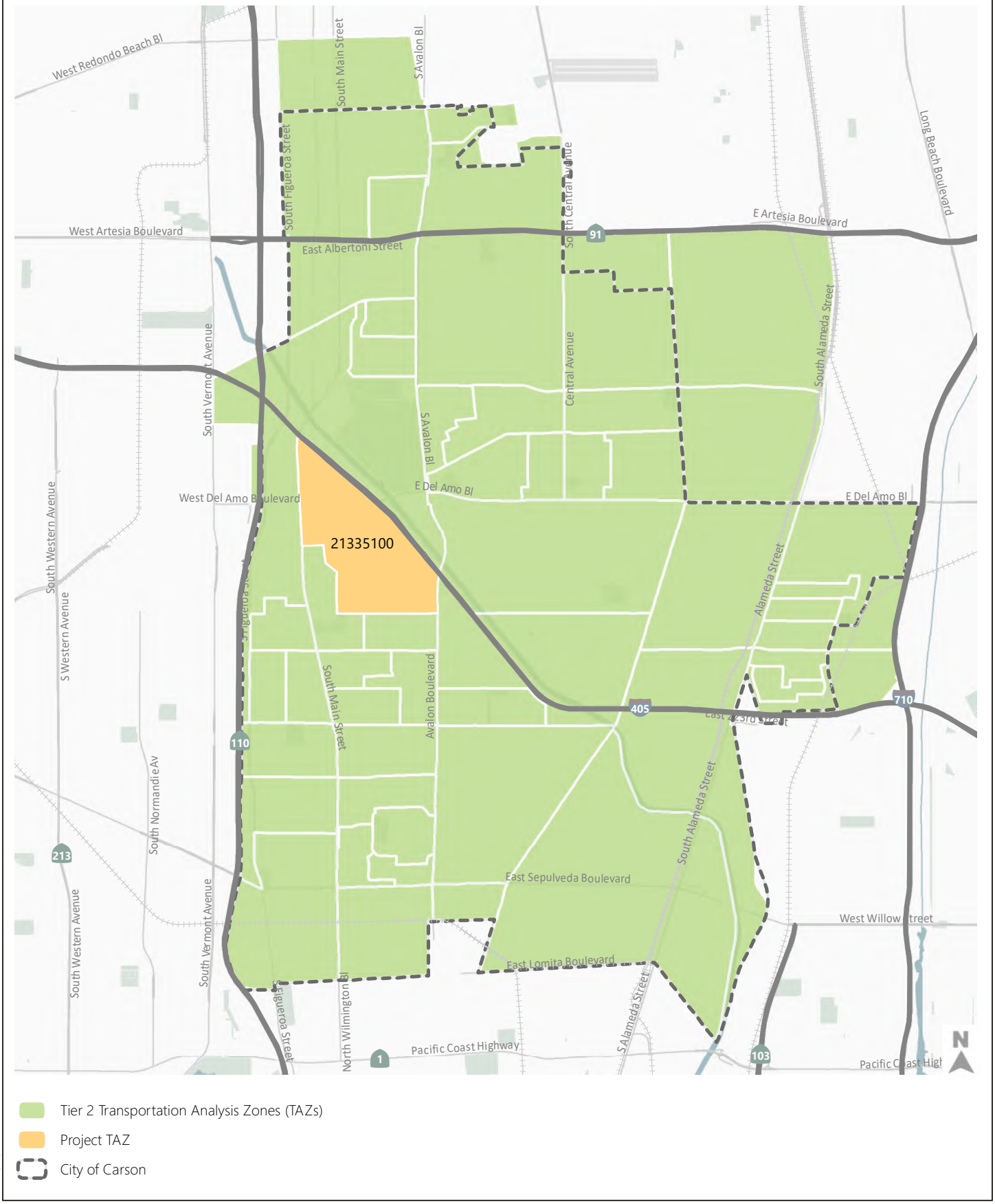
The 2016 RTP/SCS SCAG model was used to determine an appropriate baseline of VMT for projects in the City of Carson. The City's baseline VMT for home-based trips (per capita) is shown in Table 4.13-4.

Table 4.13-4. Home-Based VMT per Capita

VMT Metrics	2016 Citywide Average	Project Average	Percentage Below Citywide Average	Significant Impact?
Home-Based VMT per Capita	14.40	10.10	30%	No

Source: Appendix K
Note: VMT = Vehicle Miles Traveled

Following the standard OPR guidance, a threshold of 15% below baseline VMT is used to determine if the Project will cause significant transportation impacts. If the Project generates VMT higher than this threshold, then it is expected to have a significant impact. If the Project generates VMT lower than this threshold, then it is expected to not have a significant impact. As shown in Table 4.13-3 the home-based VMT per capita for the Project (10.1) is 30% below the Citywide average (14.4). Based on the standard OPR thresholds and interim City guidance, the Project is estimated to generate VMT per capita of less than 15% below the citywide average for this metric. All commercial uses included in the Project are each less than 50,000 square feet and therefore identified as local serving. Impacts would be **less than significant**.



SOURCE: Fehr & Peers 2021

FIGURE 4.13-4

2016 RTP/SCS SCAG Model Tier 2 Transportation Analysis Zones

Imperial Avalon Mixed-Use Project

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Although the Project would not have a VMT impact, it proposes to implement several strategies that are part of PDF- TRA-1 to encourage the use of active transportation modes, such as walking, biking, carpooling and taking transit. Because the Project's VMT would already be below the 15% threshold, the effect of these Project Design Features (PDFs) was not quantified in the Project's VMT analysis. Nonetheless, they are part of the Project and will be incorporated into the Project's conditions of approval. Implementation of PDF-TRA-1 would further reduce the already less-than-significant VMT generation of the Project.

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

Less-than-Significant Impact. The following discussion describes the potential for increased hazards as a result of geometric design features of the Project, and/or as a result of the addition of Project traffic to adjacent roadway and Caltrans facilities.

Project Site Access

The Project provides a total of four vehicle access points from both Avalon Boulevard (one signalized full access and one right-in-right-out) and Grace Avenue (one stop-controlled) full access and one right turn-in/left-turn out. The full access driveway of Avalon Boulevard/Imperial Avalon intersection would be signalized and the other three access driveways would operate as stop-controlled intersections (see Figure 3-8, Circulation Plan, in Chapter 3, Project Description). The Grace Avenue/213th Street intersection (Intersection #21) would meet the traffic signal warrant threshold during the PM peak hour under the Future Base and Future plus Project conditions. As part of PDF-TRA-2, this intersection would be signalized as part of the Project.

As such, all Project access driveways would be designed per City standards and would not increase hazards due to geometric design features or incompatible uses. All internal roadways would be 26–28 feet in width and designed per City's Public Works Department Engineering Services Standard Drawings and applicable LA County Fire Department standards.

Freeway Safety Impacts

Due to the potential for the proposed Project to add traffic to Caltrans facilities within the study area, the Caltrans freeway off-ramp and on-ramps were analyzed for freeway safety impacts. The off-ramp and on-ramp safety assessment was conducted for four traffic volume scenarios: Existing, Existing plus Project, Future (Year 2027) Base, and Future (Year 2027) plus Project scenarios. The two future scenarios consider additional traffic volume from ambient growth (0.5% linear growth per year) and related projects in the City of Carson and unincorporated Los Angeles County. This analysis utilizes the Highway Capacity Manual, 6th Edition methodology to calculate the 95th percentile queue lengths. Queue lengths were estimated using the Synchro traffic analysis software package. Intersection counts were collected at the ramp locations and signal timing information from Caltrans was used to accurately analyze operations.

As discussed previously under the heading "Hazardous Features (Queuing and Safety Analysis per Caltrans)" within Section 4.13.3, Thresholds of Significance, at the assessed off-ramp locations, a potentially significant safety impact would occur if the addition of Project vehicle trips would result in an off-ramp queue that extends onto the freeway mainline. An off-ramp queue which extends onto the freeway mainline causes a potential safety concern if a significant speed differential exists between the off-ramp queue vehicles and the freeway mainline vehicles.

For the on-ramp locations, Caltrans has not identified a set of criteria for evaluating potential significant safety impacts. In lieu of such guidance, collision data at these locations from the previous 5 years and turn pocket queue lengths with the addition of Project vehicle trips were summarized. Connections, if any, between the collision data, turn pocket queue lengths and the addition of Project vehicle trips causing potential safety concerns were identified to determine the Project's impact on safety at these intersections. The following discussion details the effect of Project traffic at both off-ramps and on-ramps.

Off-Ramp Locations

Per Caltrans comment letter and proximity of the Project to Caltrans facilities, three freeway off-ramps were evaluated to determine whether the Project would create potentially significant freeway safety impacts. The three freeway off-ramps evaluated are as follows:

- I-405 NB off-ramp to Avalon Boulevard
- I-405 southbound off-ramp to Avalon Boulevard
- I-110 NB off-ramp to Figueroa Street

Table 4.13-5 presents a summary of the off-ramp queuing analysis for all the analysis scenarios. As shown in Table 4.13-5, the freeway off-ramp queues do not exceed the storage length in any scenario or time period. Therefore, no significant freeway safety impact was identified at the off-ramp locations with the addition of Project trips.

On-Ramp Locations

The two left-turn pockets evaluated are as follows:

- NBL turn pocket from Avalon Boulevard to I-405 NB on-ramp
- NBL turn pocket from Figueroa Street to I-110 NB on-ramp

Table 4.13-6 presents a summary of the left-turn pocket queueing analysis. As shown in Table 4.13-6, the NBL turn pocket from Avalon Boulevard to I-405 NB on-ramp has a queue exceeding the storage length in both Future Base and Future plus Project scenarios. The NBL turn pocket from Figueroa Street to I-110 NB on-ramp has a queue exceeding the storage length in all four scenarios. While both left-turn pockets experience queuing issues, these findings suggest the queueing issues would occur even without the addition of Project trips. The addition of Project trips increases the forecast queue by approximately one car length on Avalon Boulevard. The Project trips are not expected to affect the Figueroa Street queue length. To further assess potential safety concerns at the on-ramp locations, collision data was compiled for the previous 5 years utilizing the California Highway Patrol's Statewide Integrated Traffic Records System.

The on-ramp locations where collision data was compiled are as follows:

- NBL turn pocket from Avalon Boulevard to I-405 NB on-ramp
- NB Avalon Boulevard approach to I-405 southbound on-ramp
- NBL turn pocket from Figueroa Street to I-110 NB on-ramp

As shown in detailed analysis included in Appendix K, none of the collisions from the previous 5 years occur at or preceding the two left-turn pockets or the NB Avalon Boulevard approach to the I-405 southbound on-ramp. There is a cluster of collisions which occurred on the I-405 NB on-ramp from Avalon Boulevard; however, based on the location of the collisions these appear to be related to the southbound right channelized merger rather than the NBL turn pocket. Therefore, no significant freeway safety impact was identified at the on-ramp locations with the addition of Project trips.

Therefore, as shown in Project site access and Caltrans Freeway Safety Analysis, the Project would not increase hazards due to a geometric design feature. The Project does not introduce incompatible uses with the surrounding community. Therefore, impacts would be **less than significant**.

Would the project result in inadequate emergency access?

Less-than-Significant Impact. The Project provides a total of four vehicle access points from both Avalon Boulevard and Grace Avenue. The location and design of these access points, as well as the on-site internal roadways, would be designed to comply with applicable local requirements related to emergency vehicle access and circulation. The primary driveway onto Avalon Boulevard would be a signalized intersection with both left and right turns available. There would be one right-turn in/out onto Avalon Boulevard at the southeastern corner of the Project site. In addition, there would be a full-access driveway as well as a potential right turn-in/left-turn out along Grace Avenue.

The Los Angeles County Sheriff's Department provides law enforcement services to the City. The Carson branch of the Sheriff's Department is within 0.25 miles of the Project site, to the south along Avalon Boulevard. The Los Angeles County Fire Department provides fire protection services to the City. The nearest fire station is within a 1.5-mile drive of the Project site, to the south on 223rd Street. The Project provides several emergency access points from both Avalon Boulevard and Grace Avenue. Because the Project's access points and driveways would be designed in accordance with applicable Public Works Department Engineering Services Standard Drawings, and have been reviewed and accepted by the Los Angeles County Fire Department, the Project site would be accessible to emergency responders during construction and operation of the Project. Therefore, impacts associated inadequate emergency access would be **less than significant**.

Table 4.13-5. Freeway Off-Ramp Queuing Analysis

N/S Street Name	E/W Street Name	Ramp Direction	Ramp Storage Length (feet)	Analyzed Period	Existing	Existing plus Project		Future Base	Future plus Project	
					95th Percentile Queue Length (feet)[1]	*95th Percentile Queue Length (feet)*[1]	*Extended Queuing*	*95th Percentile Queue Length (feet)*[1]	*95th Percentile Queue Length (feet)*[1]	*Extended Queuing*
Avalon Boulevard	NB 405 Off-Ramp	NB	975	AM	50	50	No	100	100	No
				PM	75	75	No	150	150	No
SB 405 Off-Ramp	Lenardo Drive	SB	750	AM	[2]			150	175	No
				PM				150	200	No
Avalon Boulevard	SB 405 Off-Ramp	SB	1,000	AM	225	350	No	[2]		
				PM	175	350	No			
Figueroa Street	NB 110 Off-Ramp	NB	1,150	AM	575	575	No	700	700	No
				PM	575	575	No	850	850	No

Source: Appendix K

Notes: E = East; N = North; NB = northbound; S = South; SB = southbound; W = West

1 95th percentile queue lengths are rounded up to the next 25-foot increment based on the Synchro assumption of a 25-foot car length.

2 The I-405 Southbound Off-Ramp and Avalon Boulevard interchange will be reconfigured in the future to accommodate the District at South Bay project. This analysis considers the current traffic signal configuration at the I-405 Southbound Off-Ramp & Avalon Boulevard intersection for the Existing and Existing plus Project scenarios and the future traffic signal configuration at the I-405 Southbound Off-Ramp & New Internal District at South Bay Road (tentatively called Lenardo Drive) intersection for the Future (Year 2027) Base and Future (Year 2027) plus Project scenarios.

Table 4.13-6. On-Ramp Left-Turn Pocket Queue Analysis

N/S Street Name	E/W Street Name	Ramp Direction	Ramp Storage Length (feet)	Analyzed Period	Existing	Existing plus Project		Future Base	Future plus Project	
					95th Percentile Queue Length (feet)[1]	*95th Percentile Queue Length (feet)[1]*	*Extended Queuing*	*95th Percentile Queue Length (feet)[1]*	*95th Percentile Queue Length (feet)[1]*	*Extended Queuing*
Avalon Boulevard	NB 405 On and Off-Ramp	NBL	175	AM	150	175	No	225	250	Yes
				PM	100	125	No	200	225	Yes
Figueroa Street	NB 110-On and Off-Ramp	NBL	300	AM	850	850	Yes	875	875	Yes
				PM	750	750	Yes	775	775	Yes

Source: Appendix K
Notes: E = East; N = North; NB = northbound; S = South; SB = southbound; W = West
[1] 95th percentile queue lengths are rounded up to the next 25-foot increment based on the Synchro assumption of a 25-foot car length.

Would the project have cumulatively considerable impacts with regards to transportation?

Less-than-Significant Impact. As discussed in Threshold 1, the proposed Project is consistent with the 2016–2045 RTP/SCS, City's General Plan, and Master Plan for Bikeways. Development of the Project in combination with related projects[6] is anticipated to increase the use of transit, bicycle, and pedestrian facilities in the area because the projects would increase land use intensity and would include design elements (described in Section 4.13.5) that encourage increased use of alternative transportation. With the adoption of SB 743 and VMT metric for evaluating transportation impacts under CEQA, at the local and regional level, increased use and enhancement of alternative transportation modes is being encouraged and successfully implemented. Most, if not all, of the related projects, are anticipated to increase the use of alternative transportation modes by developing services and/or residential dwellings within the vicinity of existing and future alternative transportation facilities. Development in the area, including the proposed Project and related projects, would be required to comply with applicable adopted policies, plans, or programs regarding public transit, roadway, bicycle, and pedestrian facilities. Due to the urbanized nature of the Project area and existing access to high-quality transit facilities, as well as required compliance with applicable plans and policies pertaining to transit, roadway, bicycle and pedestrian facilities, cumulative impacts would be **less than significant**.

For informational purposes, the LTA (Appendix K) includes a level of service analysis for future traffic conditions. Future traffic conditions take into account a total of 25 related projects in the City of Carson and Los Angeles County, as well as general traffic growth in the area (i.e., "background" traffic growth). The 25 related projects are all located in the vicinity the Project site and were considered to potentially contribute measurable traffic volumes to the study area during the future (Year 2027) analysis period. As part of the traffic analysis, future traffic conditions were added to the proposed Project traffic to formulate a "future-plus-project" (i.e., cumulative) scenario. The results of the level of service analysis for the traffic study area intersections for future conditions with and without the Project are provided in Appendix K for informational purposes.

As shown in Table 4.13-4, the Project is estimated to generate 10.1 daily household VMT per capita, which is 30% lower than existing City daily household VMT per capita of 14.4 VMT. Per OPR guidelines, "A project that falls below an efficiency-based threshold (i.e. total increase in VMT relative to the increase in residents or employees and not an absolute increase in VMT) that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant impact would imply a less than significant cumulative impact, and vice versa." Per the VMT analysis, the Project's VMT of 10.1 VMT per capita falls below the threshold of 12.4 VMT per capita. As such, the Project would not exceed the SCAG threshold for VMT and the Project's contribution to cumulative VMT would not be cumulatively significant.

The Project would result in an increase in the number of vehicles that enter and exit the Project site. As mentioned under Threshold 3, four driveways would provide access to the site: one full-movement driveway on Avalon Boulevard, one right-turn-in and right-turn-out driveway on Avalon Boulevard, one full-movement driveway on Grace Avenue, and one right-turn-in and left-turn out only driveway on Grace Avenue. The four driveways would be designed per City standards and the Project would not add incompatible uses to the Project area. As such, the proposed Project in combination with nearby related projects would not increase roadway hazards or add incompatible uses, and cumulative impacts would be **less than significant**.

[6] See Table 6 in Appendix I for Related Projects list.

All cumulative projects would be designed with adequate emergency access and the Project would not impede emergency access under cumulative conditions. Cumulative impacts would be **less than significant**.

4.13.5 Mitigation Measures

The Project would not have a significant impact and would not require any mitigation measures.

4.13.6 Level of Significance After Mitigation

The Project would not have a significant impact and would not require any mitigation measures.

4.13.7 References

Caltrans (California Department of Transportation). 2020. *Traffic Safety Bulletin 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioners Guidance*. December 18, 2020. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-12-22-updated-interim-ldigr-safety-review-guidance-a11y.pdf.

City of Carson. 2004. *City of Carson General Plan*. Adopted October 11, 2004. http://ci.carson.ca.us/content/files/pdfs/planning/CityofCarsonGeneralPlan.pdf.

City of Carson. 2013. *Master Plan of Bikeways*. Prepared by Ryan Snyder Associates. August 2013. https://ci.carson.ca.us/content/files/pdfs/planning/BikeMasterPlan.pdf.

ITE (Institute of Transportation Engineers). 2017. *Trip Generation Manual*. 10th ed.

OPR (California Governor's Office of Planning and Research). *2018. Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018. http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

SCAG (Southern California Association of Governments). 2020. *2020–2045 Regional Transportation Plan/Sustainable Communities Strategy*. Adopted May 7, 2020. https://www.connectsocal.org/Documents/Adopted/fConnectSoCal-Plan.pdf.

Transportation Research Board. 2016. *Highway Capacity Manual*. 6th ed. Washington, DC: Transportation Research Board.

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4.14 Utilities and Service Systems

This section describes the existing utilities conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project).

The analysis of the Project impacts related to utilities and service systems is supported by and based on information provided in the following reports:

- Water Supply Assessment, prepared by EKI Environment & Water, Incorporated, dated October 6, 2021 (Appendix L-1)
- Utilities Technical Memorandum, Imperial Avalon Mixed-Use Project, Carson California, November 3, 2020 and revised October 26, 2021 (Appendix L-2).
- Sewer Area Study, Imperial Avalon Mixed-Use Project, Carson California, October 29, 2020 and revised August 11, 2021 (Appendix L-3).
- Water Resources Technical Report, Imperial Avalon Mixed Use Project, Carson California, dated November 2, 2020 and revised August 12, 2021 (Appendix H)
- Greenhouse Gas Emissions Assessment, Imperial Avalon Project, City of Carson, prepared by Michael Baker International, dated August 13, 2021 (Appendix F)

Other sources consulted are listed in Section 4.14.7, References.

4.14.1 Existing Conditions

This section describes the existing utility and service system conditions in the Project area and also identifies the resources that could be affected by the Project. The Project is located within the jurisdictional boundaries of the City of Carson (City). Currently, the Project is developed with a 228-space mobile home park.

Water

Water Supply

Water service is provided to the City of Carson by the California Water Service Company (Cal Water), Dominguez District. Water supplies for Cal Water are derived from three principal sources: local groundwater, purchased imported water, and recycled water. Local groundwater is pumped from two adjudicated groundwater basins, including the West Coast Basin and Central Basin. Imported water is purchased from West Basin Municipal Water District (WBMWD) and the City of Torrance, both of which are member agencies of the Metropolitan Water District of Southern California. Recycled wastewater in Cal Water Dominguez District is supplied and distributed by WBMWD from the City of Los Angeles' Hyperion Wastewater Treatment Plant, which also receives treatment from the Edward C. Little Water Recycling Facility. In 2020, Cal Water supplied a total of 32,968 acre-feet (AF) of water, of which 72% of that total was purchased or imported from purchased water, 13% groundwater from a combination of the West Coast and Central subbasins, 14% recycled water, and 1% from desalinated water or groundwater (Cal Water 2021).

In accordance with the Sustainable Groundwater Management Act (SGMA), the California Department of Water Resources (CDWR) has classified both the Central Basin and West Coast Basin, in terms of prioritization, as a very low priority for preparation of a Groundwater Sustainability Plan (CDWR 2020). In addition, both groundwater basins are adjudicated and thus have a managed groundwater extraction rate, reducing the potential for over-extraction. The adjudicated rights in the Central and West Coast Basins limit the use of groundwater to 281,836 acre-feet per year (AFY): 217,367 AFY in the Central Basin and 64,468 AFY in the West Coast Basin (City of Carson 2002). Through the merger with Dominguez Service Corporation, Cal Water now owns 6,480 AFY of pumping rights for the Central Basin and 10,417.45 AFY of pumping rights from the West Coast Basin (Appendix L-1). Cal Water Dominguez District does not extract the full allocated pumping allowance with an actual extraction of only 4,271 AF in 2020 with projections that would peak in 2025 and 2030 with 5,885 AF with a final projection of 5,624 AF in 2045 (Cal Water 2021).

Cal Water Dominguez began purchasing recycled water from WBMWD in 2000. Recycled wastewater from WBMWD originates from secondary effluent received from the City of Los Angeles Hyperion Wastewater Treatment Plant, which provides secondary treatment using the activated sludge process. Most of the treated effluent is disposed of through an ocean outfall, but approximately 6% of the treated effluent is sent to WBMWD's main treatment facility, the Edward C. Little Water Recycling Facility, which encompasses 185 square miles and includes 17 cities. The WBMWD's Edward C. Little Water Recycling Facility serves approximately 32,200 AFY of recycled water to over 200 customers in its service area, but when fully constructed will have the capacity of being able to deliver 70,000 AFY. In 2020, WBMWD supplied irrigation land uses with 138 AF and industrial land uses with 4,449 AF for a total of 4,587 AF within the service area (Cal Water 2021).

Existing Water Use

The Project site is currently developed with the 228-space, Imperial Avalon Mobile Estates Mobile Home Park. The Mobile Home Park consists of 228 spaces for mobile home coaches, a recreational vehicle storage yard with over 20 spaces, and a common area including the clubhouse, grass field, recreation building, swimming pool, and guest parking spaces. From 2018 to 2020 water use at the Project site averaged 31 AFY, which is the rate considered as the baseline for the proposed Project (Appendix L-1).

Water Infrastructure

Water service for the Project site area is provided by an existing 12-inch water main located in the east side of Avalon Boulevard, adjacent to the Project site. There is one fire hydrant on the west side of South Avalon Boulevard adjacent to the Project site. There are three fire hydrants on Grace Avenue (Appendix L-2).

Wastewater

The City of Carson owns the local sanitary sewers within the City. The sewer pipelines are constructed of vitrified clay pipe, which has a normal service life in excess of 75 years. The Los Angeles County Department of Public Works Consolidated Sewer Maintenance District maintains these sewer lines, as well as collects user fees for the operation and maintenance of the lines (City of Carson 2002). Wastewater from the Project site currently discharges into an existing 8-inch-diameter sewer line in the west side of Avalon Boulevard adjacent to the Project site (Appendix L-2). This sewer line connects to a 15-inch trunk sewer in 213th Street that is run by Sanitation Districts of Los Angeles County (LACSD). There is also an existing 12-inch trunk sewer in Grace Avenue. These trunk sewers lead to the Joint Water Pollution Control Plant (JWPCP), which has an existing treatment capacity of 400 million gallons per day (gpd) (Appendix L-2).

Stormwater Drainage

The Project site and surrounding area are characterized as an urban, developed commercial and residential area with limited pervious surfaces. The Project site is currently improved with a mobile home park with an approximate imperviousness of 99%. Stormwater runoff currently flows into v-gutters throughout the Project site and is collected by various catch basins that drain to a Los Angeles County Flood Control District storm drain line that runs through the middle of the site. The County storm drain line is a 75-inch reinforced concrete pipe that drains into the nearby Dominguez Channel. Stormwater runoff in areas directly adjacent to Grace Avenue and Avalon Boulevard flows to the street curb and gutter system and does not directly discharge into the County storm drain. Additionally, an area at the southwest corner of the site flows into private property (Appendix H).

Solid Waste

The collection, transport, and disposal of solid waste and recyclables in the City is provided by Waste Management. Solid waste collected by Waste Management is sorted at the company's transfer station at 321 West Francisco Street in Carson. The 10-acre facility has a permitted capacity of 5,300 tons per day. Once the materials are sorted, wastes such as tires, green waste, steel, and wood are sent to special facilities for disposal and recycling (City of Carson 2002; CalRecycle 2021a). Commingled commercial recycling is separated and sold to different markets according to their value. Green waste is trucked to landfills for use as daily cover. Any remaining waste is primarily hauled to El Sobrante Landfill or Lancaster and Simi Valley Landfill as alternates. Details on these landfills are provided in the following text.

El Sobrante Landfill is located approximately 45 miles east of the Project site in Riverside County. This landfill is owned and operated by USA Waste Services of California. El Sobrante Landfill has a maximum permitted daily throughput of 16,054 tons of solid waste and receives an average of 10,960 tons per day. The landfill has a remaining capacity of 143,977,170 tons and is expected to remain open until 2051 (CalRecycle 2021b).

Lancaster Landfill is located approximately 55 miles north of the City in Los Angeles County. This landfill is owned and operated by Waste Management and has a maximum permitted daily throughput of 5,100 tons of solid waste with a remaining capacity of 14,514,648 tons (CalRecycle 2021c). Currently, the landfill is expected to remain open until 2044.

Simi Valley Landfill is located approximately 43 miles northwest of the City in Los Angeles County. This landfill is also owned and operated by Waste Management and has a maximum permitted daily throughput of 64,750 tons of solid waste with a remaining capacity of 82,954,873 tons (CalRecycle 2021d). Currently, the landfill is expected to remain open until 2063.

Construction waste is typically disposed of at inert landfills, which are facilities that accept materials such as soil, concrete, asphalt, and other construction and demolition debris. The Azusa Land Reclamation Landfill only accepts inert waste. This landfill is owned and operated by Azusa Land Reclamation Inc. The Azusa Land Reclamation Landfill is located approximately 28 miles northeast of the Project site. The landfill has a maximum permitted daily capacity of 8,000 tons of waste with a maximum capacity of 80,571,760 tons and a remaining capacity of 51,512,201 tons. The landfill is expected to remain open until 2045 (CalRecycle 2021e).

There are other facilities that process inert waste and other construction and demolition waste in the County. There are numerous processing facilities for construction and demolition wastes throughout the County, the nearest of which is Falcon Refuse Center Inc. located at 3031 East I Street, Wilmington, California 90744. This facility is 4.2 miles southeast of the Project site, has a permitted capacity of 1,850 tons of waste per day, and has a recycling rate of 82% (CalRecycle 2021f).

Electric Power

Electric service is provided to the Carson area by Southern California Edison, Compton Service Center. Four major substations are located within the City limits, including: Neptune substation, Alon substation, Nola substation, and Watson substation. Approximately 12 transmission facilities (66 kilovolts) extend along Wilmington Avenue and Alameda Street and feed the Southern California Edison service area or distribute directly to select high voltage customers. In addition, numerous high-voltage easements traverse the City, ranging from 120 to 500 kilovolts, which traverse the City of Carson (City of Carson 2002). Based on a substructure review, there are existing underground electric lines within the vicinity of the Project along South Avalon Boulevard. There are also above-ground electrical pole lines that supply electricity to the adjacent residential homes south of the Project along 213th Street. Overhead poles are also visible along Grace Avenue (Appendix L-2).

Natural Gas

Natural gas is supplied to the City by Southern California Gas Company. As a public utility, Southern California Gas Company is under the jurisdiction of federal and state regulatory agencies. A medium and high-pressure distribution pipeline system and a high-pressure transmission pipeline system transect the Carson boundaries (City of Carson 2002). The existing natural gas service in the vicinity of the Project site is supplied by Southern California Gas Company. From record substructure maps it has been determined that there is one existing 2-inch gas line in Grace Avenue, a 2-inch gas line in 213th Street, a 3-inch gas line in 213th Street, and a 3-inch gas line in South Avalon Boulevard (Appendix L-2).

Telecommunications Facilities

The existing telecommunications services in the vicinity of the Project site are supplied by various utilities providers such as Charter Communications, AT&T Distribution South, and Crown Castle. The companies were found through a DigAlert search and were reached out to for a Utilities Request. From a records request through the utility providers, it has been determined that aerial and underground facilities exist (Appendix L-2).

4.14.2 Relevant Plans, Policies, and Ordinances

Federal

National Pollutant Discharge Elimination System Permit Program

The National Pollution Discharge Elimination System (NPDES) permit program was established in the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States. Discharge from any point source is unlawful unless the discharge is in compliance with an NPDES permit. The federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (CFR, Title 40, Section 268, Subpart D), contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs that include federal landfill criteria. The federal regulations address the location, operation, design, and closure of landfills, as well as groundwater monitoring requirements.

State

California Code of Regulations, Titles 14 and 27

Title 14 (Natural Resources, Division 7) and Title 27 (Environmental Protection, Division 2 [Solid Waste]) of the California Code of Regulations govern the handling and disposal of solid waste and operation of landfills, transfer stations, and recycling facilities.

Assembly Bills 939 and 341: Solid Waste Reduction

The California Integrated Waste Management (CIWM) Act of 1989 (Assembly Bill [AB] 939) was enacted as a result of a national crisis in landfill capacity, as well as a broad acceptance of the desired approach to solid waste management of reducing, reusing, and recycling. AB 939 mandated local jurisdictions to meet waste diversion goals of 25% by 1995, 50% by 2000, and established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance. AB 939 requires cities and counties to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element to demonstrate how the jurisdiction will meet the diversion goals. Other elements included encouraging resource conservation and considering the effects of waste management operations. The diversion goals and program requirements are implemented through a disposal-based reporting system by local jurisdictions under CIWM Board regulatory oversight. Since the adoption of AB 939, landfill capacity is no longer considered a statewide crisis. AB 939 has achieved substantial progress in waste diversion, program implementation, solid waste planning, and protection of public health, safety, and the environment from landfills operations and solid waste facilities.

In 2011, AB 341 was passed, making a legislative declaration that it is the policy goal of the state that not less than 75% of solid waste generated be source reduced, recycled, or composted by the year 2020. AB 341 requires that local agencies adopt strategies that will enable 75% diversion of all solid waste by 2020. This bill requires all commercial businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. In addition, multifamily apartments with five or more units are also required to form a recycling program.

Senate Bill 1374: Construction and Demolition Waste Reduction

Senate Bill (SB) 1374 requires that annual reports submitted by local jurisdictions to CIWM Board include a summary of the progress made in the diversion of construction and demolition waste materials. In addition, SB 1374 requires the CIWM Board to adopt a model ordinance suitable for adoption by any local agency that required 50% to 75% diversion of construction and demolition waste materials from landfills. Local jurisdictions are not required to adopt their own construction and demolition ordinances, nor are they required to adopt CIWM Board's model by default.

Assembly Bill 1327: California Solid Waste Reuse and Recycling Access Act of 1991

AB 1327, which was established in 1991, required CalRecycle to develop a model ordinance for the use of recyclable materials in development projects. Local agencies were then required to adopt the model ordinance, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects.

Assembly Bill 1826: Mandatory Commercial Organics Recycling

In October 2014, Governor Brown signed AB 1826 Chesbro (Chapter 727, Statutes of 2014), requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste generated per week. "Organic waste" is defined as food waste, green waste, landscape, and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. This law phases in the mandatory recycling of commercial organics over time. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to recycle organic waste.

Senate Bill X7-7

SB X7-7, which became effective on February 3, 2010, is the water conservation component to the Delta legislative package (SB 1, Delta Governance/Delta Plan). The bill implements water use reduction goals established in 2008 to achieve a 20% statewide reduction in urban per capita water use by December 31, 2020. The bill requires each urban retail water supplier to develop urban water use targets to help meet the 20% goal by 2020 and an interim 10% goal by 2015. The bill establishes methods for urban retail water suppliers to determine targets to help achieve water reduction targets. The retail water supplier must select one of the four compliance options. The retail agency may choose to comply with SB X7-7 as an individual or as a region in collaboration with other water suppliers. Under the regional compliance option, the retail water supplier must report the water use target for its individual service area.

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley)—collectively known as the Sustainable Groundwater Management Act (SGMA). This Act requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, sustainability should be achieved by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through SGMA, the CDWR provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies to manage basins sustainably and requires those Groundwater Sustainability Agencies to adopt Groundwater Sustainability Plans for crucial groundwater basins in California.

Urban Water Management Plans

Pursuant to the California Urban Water Management Act (California Water Code Sections 10610–10656), urban water purveyors are required to prepare and update an Urban Water Management Plan (UWMP) every 5 years. UWMPs are prepared by California's urban water suppliers to support long-term resource planning and ensure adequate water supplies. Every urban water supplier that either delivers more than 3,000 AFY of water annually or serves more than 3,000 connections are required to assess the reliability of its water sources over a 20-year period under normal-year, dry-year, and multiple-dry-year scenarios in a UWMP. UWMPs must be updated and submitted to the CDWR every 5 years for review and approval. The proposed Project site is within the area addressed by Cal Water Dominguez District, whose current UWMP is the 2020 UWMP released in June 2021 (Cal Water 2021). The

site is also located within the areas covered by other relevant water planning documents including the WBMWD UWMP, and the Metropolitan Water District of Southern California UWMP. The Cal Water Dominguez District UWMP takes into account the projections and findings of the WBMWD UWMP and the Metropolitan Water District of Southern California UWMP.

Senate Bill 610 and Senate Bill 221: Water Supply Assessments

SB 610 and SB 221, amended into state law effective January 1, 2002, improve the linkage between certain land-use decisions made by cities and counties and water supply availability. The statutes require detailed information regarding water availability and reliability with respect to certain developments to be included in the administrative record, to serve as the evidentiary basis for an approval action by the City or County on such projects. Under Water Code Section 10912 [a], projects subject to the California Environmental Quality Act (CEQA) that would require a water supply assessment include the following:

(1) Residential development of more than 500 dwelling units
(2) Shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space
(3) Commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space
(4) Hotel, motel or both, having more than 500 rooms
(5) Industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land or having more than 650,000 square feet of floor area
(6) Mixed-use projects that include one or more of the projects specified
(7) A project that would demand an amount of water equivalent to or greater than the amount required by a 500 dwelling unit project

A fundamental source document for compliance with SB 610 is the UWMP, which can be used by the water supplier to meet the standard for SB 610. SB 221 applies to the Subdivision Map Act, conditioning a tentative map on the applicant to verify that the public water supplier has sufficient water available to serve the proposed development.

Executive Order B-29-15

In response to California's previous drought, Executive Order B-29-15 set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the Executive Order extended through February 28, 2016, although many of the directives became permanent water-efficiency standards and requirements. The Executive Order includes specific directives that set strict limits on water usage in the state. In response to Executive Order B-29-15, the CDWR modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Sanitary Sewer General Waste Discharge Requirements

On May 2, 2006, the State Water Resources Control Board adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than 1 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows by requiring public

sewer system operators to take all feasible steps to control the volume of waste discharged into the system in order to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the State Water Resources Control Board using an online reporting system.

California Code of Regulations Title 24, Part 11

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code, Part 11 of Title 24, is commonly referred to as CALGreen and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all new construction of residential and non-residential buildings. CALGreen standards are updated periodically. The latest version became effective on January 1, 2019.

Mandatory CALGreen standards pertaining to water, wastewater, and solid waste include the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings.
- Mandatory reduction in outdoor water use through compliance with a local water-efficient landscaping ordinance or the CDWR's Model Water Efficient Landscape Ordinance.
- Diversion of 65% of construction and demolition waste from landfills.

Local

Water Quality Control Plans (Basin Plans)

The Porter-Cologne Act, Section 13000, directs each Regional Water Quality Control Board to develop a water quality control plan (Basin Plan) for all areas within its region. The Basin Plan is the basis for each Regional Water Quality Control Board's regulatory program. The Project site is located within the purview of the Los Angeles Regional Water Quality Control Board (Region 4), and the proposed Project must comply with applicable elements of the Basin Plan for Region 4. The Basin Plan gives direction on the beneficial uses of state waters, describes the water quality that must be maintained, and provides programs necessary to achieve the standards established in the Basin Plan.

Integrated Regional Water Management Plans

UWMPs serve as building blocks for Integrated Regional Water Management Plans (IRWMPs). IRWMPs define a clear vision and strategy for the sustainable management of water resources within a specific region delineated by one or more watersheds. IRWMPs generally contain an assessment of current and future water demand, water supply, water quality, and environmental needs. These plans address the challenges for delivering a stable and clean supply of water for the public, addressing stormwater and urban runoff water quality, providing flood protection, meeting water infrastructure needs, maximizing the use of reclaimed water, enhancing water conservation, and promoting environmental stewardship.

During the planning process, all stakeholders, including water distributors and purveyors, regional waterworks and sanitation districts, local public works departments, environmental organizations, nonprofits, and other vested interests work together to develop common goals, objectives, and strategies. Since water-related issues are

addressed on a regional, watershed basis, these plans are instrumental in building consensus among the various stakeholders in the development and prioritization of an action plan that is complementary and leverages inter-jurisdictional cooperation, resources, and available funding. The Project site is within the Greater Los Angeles County IRWMP area. The IRWMP for this area was last updated in 2014.

Countywide Integrated Waste Management Plan

In compliance with AB 939, the County of Los Angeles has implemented an Integrated Waste Management Plan that contains the County's and the Cities' solid waste reduction planning documents plus the Integrated Waste Management Summary Plan and Countywide Siting Element. The Los Angeles County Department of Public Works is responsible for preparing and administering the Integrated Waste Summary Plan and the Countywide Siting Element. The existing element, approved by CalRecycle on June 24, 1998, identifies how the County and cities would meet their long-term disposal capacity needs to safely handle solid waste that cannot be reduced, recycled, or composted.

The Los Angeles County Department of Public Works also prepares an annual report to summarize the changes that have taken place since the approval of the existing Countywide Integrated Waste Management Plan and the existing Countywide Siting Element. The annual reports include assessments of the County's disposal capacity needs, provide detailed updates on the remaining permitted in-County disposal capacity, and include the County's strategy for maintaining adequate disposal capacity through 2027.

General Plan

In 2006, the City of Carson revised its 2004 General Plan to address the City's future development goals. This document, in part, contains goals aimed at maintaining and improving utilities throughout the City.

Policies Relating to Utility Upgrade Construction Activities:

OSC-2.1 Maintain and improve water quality.

OSC-2.2 Continue to monitor land uses discharging into water sources and water recharge areas to prevent potential contamination from hazardous or toxic substances.

OSC-2.3 Minimize soil erosion and siltation from construction activities through monitoring and regulation.

Policies Relating to Water Conservation:

OSC-2.4 Conserve the water supply available to the City and promote water conservation in the management of public properties.

OSC-2.5 Educate citizens about water conservation to encourage its practice and monitor its effectiveness.

Policies Relating to Utility Infrastructure:

TI-8.1 Continue to maintain, improve, and replace aging water and wastewater systems to ensure the provision of these services to all areas of the community.

TI-8.2 As development intensifies and/or as land redevelopment occurs in the City, ensure that infrastructure systems are adequate to accommodate any intensification of uses, as well as existing uses.

TI-10.1 Pursue State, Federal, and other available funding sources to improve and enhance public facilities.

TI-10.3 Rehabilitate public facilities using technologies, methods, and materials which result in energy and water savings and implement cost-effective, long-term maintenance programs.

OSC-3.3 Work with energy providers to develop and implement programs to reduce electrical demand in residential, commercial and industrial developments.

Policies Relating to Solid Waste:

OSC-4.1 Reduce the generation of solid waste from sources in the City in accordance with the Source Reduction and Recycling Element for Carson (separate from the General Plan) and State regulations.

OSC-4.2 Develop a public education program to address waste management and proper household waste sorting and handling.

OSC-4.3 Facilitate physical collection of recyclable waste.

Policies Relating to Telecommunications Infrastructure:

TI-9.2 As development intensifies and/or as redevelopment occurs in the City, encourage the provision of communication, fiber optic, and other systems to accommodate any intensification of uses, as well as existing uses.

California Water Service Company's Dominguez District Urban Water Management Plan

Cal Water Dominguez District updated its UWMP in accordance with the Urban Water Management Planning Act. Cal Water Dominguez District 2020 UWMP was adopted in June 2021. The UWMP includes estimates of past, current, and projected potable and recycled water use, identifies water conservation and reclamation measures currently in practice, describes alternative conservation measures, and provides an urban water shortage contingency plan. The factors forecasting the Cal Water Dominguez District's future water demand include utilizing the CDWR population tool and historical Southern California Association of Governments' census tract projections.

4.14.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to utilities and service systems are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to utilities and service systems would occur if the Project would:

1. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
2. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

3. 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.
4. 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.
5. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.
6. Result in cumulatively considerable impacts relating to utilities and service systems.

4.14.4 Impacts Analysis

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?

Water Facilities

Less-than-Significant Impact. The proposed Project would involve the construction of water distribution infrastructure (e.g., pipes, valves, meters) to provide domestic water, firewater, and irrigation water to serve the new buildings and facilities within the Project site. The on-site facilities would be connected to off-site water lines in the adjacent rights-of-way. For water service, the proposed Project would connect to existing lines within Avalon Boulevard and Grace Avenue. The on-site facilities and installation/construction of tie-ins are considered part of the proposed Project. All construction work within the City public right-of-way would be subject to City municipal code requirements. Other than the lateral connections from the Project site to existing water mains, the proposed Project is not expected to require or result in construction or expansion of off-site infrastructure.

Construction impacts associated with the installation of water distribution lines would primarily involve trenching in order to place the water distribution lines below surface and would be limited to on-site water distribution, and minor offsite work associated with connections to the public water mains. In addition, and consistent with Section 4.8, Hydrology and Water Quality, standard best management practices, installed as part of an NPDES-mandated stormwater pollution prevention plan, would reduce potential water quality impacts associated with the referenced water facility connections to less-than-significant levels. As such, the proposed Project would not result in the expansion or construction, expansion, or relocation of off-site water infrastructure, and it is unlikely that there would be any significant environmental effects related to the construction of water infrastructure within the Project site. As a result, impacts would be **less than significant**.

Wastewater Conveyance and Treatment Facilities

Less-than-Significant Impact. The Project will require construction of new wastewater infrastructure within the Project site to serve the buildings and facilities of the proposed Project. Construction impacts within the Project site associated with wastewater infrastructure would primarily be confined to trenching for miscellaneous utility lines and connections to public infrastructure. Installation of wastewater infrastructure would be limited to on-site wastewater distribution, and minor off-site work associated with connections to the public main.

The Project site would be served by existing sewer mains present on the east and west sides of Avalon Boulevard, as well as a trunk sewer within Grace Avenue. The existing sewer main within Avalon Boulevard is 8-inches in diameter and connects to a 15-inch trunk sewer in 213th Street, and the trunk sewer within Grace Avenue is 12-inches in diameter. As discussed in the Sewer Study (Appendix L-3), at final buildout, it is anticipated that sewer

flows from the Project site would be split between the two sewer lines adjacent to the site. The Project would send 37% of the wastewater flows to the 12-inch sewer main within Grace Avenue, and would send 63% of the wastewater flows to the 8-inch sewer main in Avalon Boulevard (Appendix L-3).

The Project's total proposed peak flow will discharge approximately 696,430 gpd into the sewer system. With the proposed split percentages noted previously, the proposed peak flow from the Project would be 256,300 gpd to the 12-inch trunk sewer line in Grace Avenue and 440,130 gpd to the 8-inch sewer main in Avalon Boulevard (Appendix L-3). In order for the 63% of the Project's proposed sewer discharge to be directed to the 8-inch sewer main in Avalon Boulevard, the 8-inch sewer main must be upgraded from 8-inch to 12-inch diameter pipe for approximately 350 feet and included as part of the proposed Project (Appendix L-3). Thus, while in the current condition, the sewer main within Avalon Boulevard that the Project would not have adequate capacity to handle the wastewater flows generated by the Project, upgrading the pipeline for a 350-foot length would meet Project demands. Upgrading the pipeline would be conducted in accordance with City municipal code requirements and NPDES Construction General Permit requirements such that impacts related to the upgrade would be minimized. Therefore, in relation to wastewater conveyance systems, the Project would result in a **less-than-significant impact**.

The average wastewater expected to be generated by the proposed Project is approximately 0.696 million gallons per day (mgd). Off site, wastewater would be conveyed through municipal sewage infrastructure to the LACSD's JWPCP, which has an approximate treatment capacity of 400 mgd and, as of 2019, is estimated to produce an average flow of 260 mgd, or approximately 65% of its total capacity (LACSD 2021). Projected wastewater from the Project would represent approximately 0.05% of the remaining capacity of the treatment facility. As such, since the Project would not exceed the available treatment capacity of the JWPCP and outside of the aforementioned upgrading of the existing 8-inch sewer line to a 12-inch line, it would not require the construction of any other additional wastewater treatment infrastructure. Impacts related to wastewater treatment facilities would be **less than significant**.

Stormwater Drainage Facilities

Less-than-Significant Impact. The Project site and surrounding area are characterized as an urban, developed commercial and residential area with limited pervious surfaces. Planters with ornamental trees, shrubs, and grasses are scattered sparsely throughout the Project site. The predominance of impervious surfaces prevents water from percolating into the ground, increasing the amount of runoff reaching the storm drain infrastructure. In addition, as discussed in Section 4.8, Hydrology and Water Quality, stormwater infiltration would not be utilized as a low impact development feature as a part of the proposed Project, as the site is underlain by clay-rich soils and shallow groundwater, which are not conducive to infiltration.

The Project-specific Water Resources Technical Report (Appendix H) includes an existing and proposed condition hydrologic analysis to determine whether the post-construction runoff would have any impact on the receiving storm drain system. The Project site is currently 99% impervious with all stormwater runoff directed to existing drainage infrastructure. The proposed Project would reduce the impervious surface area within the Project site to 75.6% once all of the Project improvements, landscaping, and amenities are installed. The Project would include the installation of building roof drain downspouts, area drain, and planter drains to collect roof and site runoff. According to the hydraulic report, based on the volumetric flow rate analysis, a comparison of the pre- and post-Project peak flow rate indicated that there would be a decrease in stormwater runoff. Therefore, the proposed Project would not create or contribute runoff water, which would exceed the capacity of existing stormwater drainage systems.

As a result, the Project would not result in the expansion of any existing off-site facilities or in the construction or relocation of new off-site facilities. The proposed stormwater flows would be reduced from existing conditions and would drain into the existing 75-inch storm drain line that runs through the middle of the Project site. Upon compliance with the applicable regulatory requirements, impacts associated with the construction of any new stormwater drainage facilities would be **less than significant**.

Electric Power, Natural Gas, and Telecommunication

Less-than-Significant Impact. Connections upgrades would be required with respect to electric power, natural gas, and telecommunication facilities (i.e., cable television services), based on the change in land use (i.e., greater intensification). These utilities would be part of a dry utility package that would be installed on site and in the adjacent public roadways to provide service to the Project. Upgrades would be confined to the connections to the Project site and not any off-site centralized facilities. The existing infrastructure is located directly adjacent to the Project site within the public streets. Connection to these existing utilities would require limited construction, which would be temporary and limited to trenching, to the depth of the underground lines. Project construction would occur in accordance with all applicable regulatory requirements. As a result, impacts associated with upgrades of electric, natural gas, and telecommunication lateral connections to the Project site would be **less than significant**.

Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less-than-Significant Impact. Water supply in the City is served by Cal Water Dominguez District, which is located in the southern portion of the Los Angeles coastal plain, in an area known as the "South Bay." The district's 35-square-mile service area, located approximately 5–10 miles inland from the Los Angeles Harbor, includes the Project site. Cal Water Dominguez District receives water from three sources: Cal Water's domestic water supply, purchased imported water, and groundwater. In 2020, Cal Water supplied 14% of its water supply from recycled water, 72% from purchased water and 13% from local groundwater supplies. Cal Water's groundwater supplies are sourced from two adjudicated groundwater basins: the West Coast Basin, and the Central Basin.

Future development under the proposed Project would consist of the construction of 1,213 dwelling units and 10,352 square feet of commercial/food service uses.

According to the Utilities report, the proposed Project is estimated to result in a total water demand of 134,804 gpd, which is equivalent to 151 AFY, as shown in Table 4.14-1, Proposed Potable Water Demand.

As previously discussed, Cal Water Dominguez generally plans to source 10%–20% of its water supply from groundwater. If previous water trends continue, between 15.1 AFY and 30.2 AFY of the Project's net water demand would be derived from groundwater. This value would represent a marginal increase of approximately 0.09% to 0.18% of Cal Water's allowable pumping allocation of 16,897 AFY from both the Central and West Coast Basins.

Table 4.14-1. Proposed Project Water Demand

Land Use	Density/Intensity	Average Generation Factor[a]	Average Daily Water Demand (gpd)	Estimated Water Use (AFY) 2045-Ultimate Condition
Single-Family Housing	380 DU	169 gpd	64,220	72
Multi-Family Housing	103 DU	103 gpd	85,800	97

Table 4.14-1. Proposed Project Water Demand

Land Use	Density/Intensity	Average Generation Factor[a]	Average Daily Water Demand (gpd)	Estimated Water Use (AFY) 2045-Ultimate Condition
Commercial Space	10,352 SF	0.028 gpf/SF	290	0.32
Landscaping/Open Space	281,446 SF	—	5,900	6.6
Pools/Spas	—	—	560	0.62
System Water Losses (3.4%)	—	—	5,350	6.0
Existing Site Use	—	—	-27,700	-31
		Total	134,420	151

Source: Appendix L-1.
Notes: gpd = gallons per day; DU = dwelling units; SF = square feet; AFY = acre-feet per year.
[a] All flows were calculated using historical water data for the Dominguez District, as provided in the Cal Water Water Supply Assessment Water Factor Tool.

The 2020 Cal Water Dominguez District UWMP has planned for growth within the Dominguez service area over the next 25 years. Cal Water has made an allowance for future demand estimates based on historical growth rates in the service area. Based on these projections, Cal Water has adequately made allowance for water supply–demand increases for both domestic and commercial water supply, including groundwater, over the next 25 years. According to Table 4.3, Total Gross Water Use (Potable and Non-Potable), of the Cal Water Dominguez 2020 UWMP, Cal Water projects an increase in water demand of 118 AFY between 2020 (32,968 AFY) and 2045 (33,086 AFY) (Cal Water 2021). This projected increase was revised over the 2015 UWMP due to accounting for anticipated reductions in water use from ongoing changes in appliance standards and plumbing codes, conservation programs, and growth in water service costs. While the proposed Project was not specifically included as part of the UWMP, the demand projections for the district do account for growth over the planning horizon and Cal Water has determined that the proposed Project's demand is within the anticipated growth for their service area and the 2020 UWMP demand projections (Appendix L-1).

Furthermore, as long-term water supply is a significant concern in California, Cal Water Dominguez District can increase supply to meet future demands increasing production of groundwater based off safe yield allocation and utilization of water in storage, increasing imported water purchases, if available and there is sufficient storage capacity, and by purchasing additional recycled water, if available. Collectively, these additional options would enable water supply to meet or exceed water demand for Cal Water Dominguez District for now and into the future. These findings were also made in a Water Supply Assessment prepared for the Project and approved by the Cal Water Dominguez District staff.[1] As a result, the Project would result in **less-than-significant impacts** related to the water supply.

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?

Less-than-Significant Impact. Off-site wastewater would be conveyed through municipal sewage infrastructure to the LACSD's JWPCP, which has an approximate treatment capacity of 400 mgd and, as of 2019, had an estimated average flow of 260 mgd, or approximately 65% of its total capacity (LACSD 2021). Projected wastewater from the

[1] On October 27, 2021, the California Water Service Company Board of Directors adopted a resolution delegating its authority to approve water supply assessments and related documents, as required under California Water Code Sections 10910–10912, to any officer of California Water Service Company (Appendix L-1).

Project would represent approximately 0.689 mgd or 0.05% of the remaining capacity of the treatment facility. As such, since the Project would not exceed the available treatment capacity of the JWPCP or existing sewer lines with the upsizing of the 8-inch Department of Public Works line within Avalon Boulevard to a 12-inch line for approximately 350 feet, it would not require the construction of additional wastewater treatment infrastructure. Impacts related to wastewater treatment facilities would be **less than significant.**

In addition, the Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' sewerage system for increasing the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the sewerage system to accommodate the proposed Project. Furthermore, water conservation measures as established by the City's General Plan (e.g., xeriscaping, improved irrigation systems, public education about conservation, etc.) would be implemented and would help reduce the amount of wastewater generated by the Project. Therefore, Project impacts would be **less than significant**.

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?

Construction

Less-than-Significant Impact. Construction of the proposed Project would result in the generation of solid waste such as scrap lumber, concrete, residual wastes, packing materials, plastics, and soils. Any hazardous wastes that are generated during demolition and construction activities would be managed and disposed of in compliance with all applicable federal, state, and local laws. Per CALGreen requirements, 65% of construction and demolition waste must be diverted from landfills. As such, at least 65% of all construction and demolition debris from the site would be diverted. The County also has construction and demolition debris diversion requirements; however, the CALGreen standards require an equivalent level of diversion (65% diversion). The remaining 35% of construction and demolition material that is not required to be recycled would either be disposed of or voluntarily recycled at a solid waste facility with available capacity. As described in Section 4.14.1, Existing Conditions, the inert landfill in the County (Azusa Land Reclamation landfill) has a remaining capacity of 51,512,201 tons and is expected to remain open until 2045 (CalRecycle 2021e).

Other facilities that process inert waste and other construction and demolition waste in the County have a collective maximum daily capacity of 35,541 tons (Los Angeles County Public Works 2020). In addition, numerous processing facilities for construction and demolition wastes are located throughout the County, the nearest of which is Falcon Refuse Center Inc., located at 3031 East I Street, in Wilmington. This facility is 4.2 miles southeast of the Project site, has a permitted capacity of 1,850 tons of waste per day, and has a recycling rate of 82%. As such, any construction and demolition debris requiring disposal at an inert waste landfill would be sufficiently accommodated by existing landfills or recycling facilities.

For the reasons previously stated, Project demolition and construction would not 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.g., CALGreen standards). Impacts would be **less than significant**.

Operations

Less-than-Significant Impact. Once operational, the proposed Project would produce solid waste on a regular basis, in association with operation and maintenance activities. Anticipated solid waste generation attributable to the Project is shown in Table 4.14-2, Anticipated Solid Waste Generation (Appendix F). The solid waste generation rates assume compliance with AB 341.

Table 4.14-2. Anticipated Solid Waste Generation

Land Use	Solid Waste Generation (tons per year)
Apartments Mid-Rise	191.6
On-Site Park	0.2
Condo/Townhouse	87.4
Enclosed Parking with Elevator	0
Health Club	52.5
Other Asphalt Surfaces	0
Parking Lot	0
Quality Restaurant	4.7
Recreational Swimming Pool	4.8
Total	341.2

Source: Appendix F.

As described in Section 4.14.1, the City's commercial uses are currently served by Waste Management for solid waste collection and disposal. Waste is primarily hauled to El Sobrante Landfill and the Lancaster Landfill. El Sobrante Landfill has a remaining capacity of 143,977,170 tons and is expected to remain open until 2051 (CalRecycle 2021b). The net solid waste that is anticipated to be produced by the proposed Project would equate to approximately 0.0002% of the available capacity of the El Sobrante Landfill through its estimated closure date. The Lancaster Landfill, which has a remaining capacity of 14,514,648 tons, is expected to remain open until 2044 (CalRecycle 2021c). The anticipated solid waste to be produced by the Project would equate to approximately 0.002% of the available capacity through this landfill's closure date.

Once the El Sobrante Landfill and Lancaster Landfill reach capacity, additional landfills and strategies would be identified so that disposal needs continue to be met. Further, according to the latest annual report for the Countywide Integrated Waste Management Plan, there are landfills used by the County with up to 109 years of remaining life. For example, the Prima Deshecha Sanitary Landfill in Orange County is expected to remain open for another 83 years, the Mesquite Regional Landfill in Imperial County is expected to remain open for another 109 years, and the Simi Valley Landfill in Ventura County is expected to remain open for another 109 years (Los Angeles County Public Works 2020). As such, in the event of closure of the El Sobrante and Lancaster landfills, other landfills in the region would be able to accommodate solid waste from the proposed Project, and regional planning efforts would ensure continued landfill capacity into the foreseeable future.

For the reasons described above, Project operations would not 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. Impacts would be **less than significant**.

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

Less-than-Significant Impact. As described in Section 4.14.1, solid waste from commercial uses in the City are brought to the Waste Management transfer station in Carson. From there, the waste is primarily taken to the El Sobrante Landfill or the Lancaster Landfill. These facilities are regulated under federal, state, and local laws. Additionally, the City is required to comply with the solid waste reduction and diversion requirements set forth in AB 939, AB 341, AB 1327, and AB 1826 (Section 4.14.2, Relevant Plans, Policies, and Ordinances). Per AB 341, businesses that generate 4 cubic yards or more of commercial solid waste per week are required to arrange for organic waste recycling services.

In addition, as previously described, waste diversion and reduction during Project construction and operations would be completed in accordance with CALGreen standards and City diversion standards. As a result, the proposed Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Impacts are considered **less than significant**.

Would the Project have cumulatively considerable impacts with regards to utilities and service systems?

Water Supply

Less-than-Significant Impact. Development of the proposed Project, in combination with related past, present and reasonably foreseeable projects, would increase land-use intensities in the area, resulting in increased water usage. The proposed Project and related improvements would be served by the Cal Water Dominguez District. As such, the development of the proposed Project would increase the amount of water used in the Cal Water Dominguez District's service area. Cal Water Dominguez District UWMP describes the total annual water demand in Cal Water Dominguez District's service area in 2020 was over 28,381 AF or 25.3 mgd. The Cal Water Dominguez District UWMP states that Cal Water and other water agencies in Southern California have planned for the provision of regional water for the growing population, including drought scenarios for its service area. The plan includes a new water demand forecast prepared for the major categories of demand and uses regional population, demographic projections, the dry climate, historical water use to develop these forecasts. These projections consider land use, water development programs and projects, and water conservation in a cumulative context. As such, to the extent that related projects are generally consistent with regional growth patterns and projections, the projects would not be expected to result in increased water usage causing the need for new entitlements, resources, and/or treatment facilities that are not already being planned to accommodate regional growth forecasts.

Cal Water Dominguez District has the opportunity to increase supply to meet future demands through the following measures:

1. Production of groundwater based on safe yield allocation and utilization of water in storage
2. Increasing imported water purchases, if available
3. Purchasing additional recycled water, if available

Collectively, these additional options would enable water supply to exceed water demand for Cal Water Dominguez District now and into the future.

Lastly, compliance with the CALGreen Building Code would be required for all new development. For redevelopment projects, this generally indicates that newly installed appliances and plumbing would be more efficient than those used within the structures originally located on redevelopment sites. In addition, CALGreen Building Code standards require a mandatory reduction in outdoor water use, in accordance with the CDWR Model Water Efficient Landscape Ordinance. This would ensure that many of the related improvements and cumulative projects, including the proposed Project, do not result in wasteful or inefficient use of limited water resources and may, in fact, result in an overall decrease in water use per person.

Due to water planning efforts, water conservation standards, and the urban infill/redevelopment nature of the proposed Project and many of the related projects, cumulative impacts would be **less than significant**.

Wastewater

Less-than-Significant Impact. The Project in combination with each related and proposed improvement would incrementally increase the amount of wastewater that is being generated in the area. As previously described, the existing sewer line within Avalon Boulevard that serves the Project site does not have the capacity to convey the estimated peak flow generated from the Project; thus, 350 feet of the existing 8-inch sewer main within Avalon Boulevard would require upgrading to a larger size (12 inch) for the proposed Project that would tie into that line. This limited conveyance system upgrade represents the only improvement necessary to address the Project's wastewater needs. As described and analyzed above and within this section the Project's wastewater impacts, when considered in a cumulative context, would be less than significant Similar to the proposed Project, cumulative projects would be required to implement standard best management practices, as part of an NPDES-mandated stormwater pollution prevention plan, which would reduce potential water quality impacts to less-than-significant levels. Therefore, the Project combined with related cumulative projects would result in a **less than significant** impact related to the expansion of the existing wastewater infrastructure required to accommodate the increased wastewater flows.

Similar to the Project, the capacity of receiving sewer lines associated with cumulative projects from the past, present, and reasonably foreseeable future would be determined on a Project-specific basis. In the event that sewer upgrades are required, all construction work within the City public rights-of-way would be subject to local municipal code requirements. Other than the lateral connections from the related project sites to existing sewer mains, these related projects are not expected to require or result in construction or expansion of off-site infrastructure. As a result, indirect or direct cumulative impacts associated with upgrades of sewer lateral connections to related project sites would not be cumulatively considerable.

Similarly, the Project would generate approximately 0.689 mgd of wastewater, which would represent an increase of approximately 0.05% of the collective capacity of the LACSD's JWPCP. As cumulative increases in wastewater treatment demand within the service area require facility upgrades, the LACSD would include service connection fees in their capital improvement plans. Such fees would ensure that capital improvements are completed sufficiently to accommodate increased wastewater inflows associated with the Project area. As such, cumulative impacts would be **less than significant**.

Solid Waste

Less-than-Significant Impact. Development of the Project, in combination with related past, present, and reasonably foreseeable projects, would increase land-use intensities in the area, resulting in increased solid waste generation in the service area for the El Sobrante Landfill or the H.M. Holloway Landfill. However, the proposed Project and

those related projects have been or would be implemented within an urban infill and/or redevelopment project area. As such, solid waste is already being generated or being accounted for at the Project site and the related project sites. Further, AB 939, or the Integrated Waste Management Act of 1989, mandates that cities divert from landfills 50% of the total solid waste generated to recycling facilities. In order to maintain state requirements of diverting 50% of solid waste and to offset impacts associated with solid waste, the proposed Project and all related projects, when considered in a cumulative context, would be required to implement waste reduction, diversion, and recycling during both demolition, construction, and operation.

Through compliance with City and state solid waste diversion requirements, along with the recycling collection process that would be part of the proposed Project design, cumulative impacts associated with solid waste would be **less than significant**.

Electric Power, Natural Gas, and Telecommunication

Less-than-Significant Impact. The City built-out and upgrades in electrical power, natural gas, and telecommunication capabilities are anticipated primarily due to development in the form of the revitalization of outdated or underserved areas, and redevelopment of specific properties that will increase density and require more sophisticated technology, such as the proposed Project. However, such upgrades would generally be confined to the lateral connections between existing services already provided to the individual project sites and not any new or improved centralized facilities. Upgrades to centralized power, natural gas, and telecommunication facilities would be determined by each of the power, gas, and telecommunications providers, as revitalization and redevelopment within the build-out area continues within the region. Individual projects would be required to provide for specific project needs. As a result, cumulative impacts associated with upgrades of electric, natural gas, and telecommunication facilities would not be cumulatively considerable. Impacts would be **less than significant**, and no mitigation is required.

4.14.5 Mitigation Measures

No mitigation is required, as all impacts would be **less than significant**.

4.14.6 Level of Significance After Mitigation

All impacts were determined to be **less than significant**. No mitigation is required.

4.14.7 References

Cal Water (Cal Water Service Company). 2021. *2020 Urban Water Management Plan, Dominquez District*. Printed June 25, 2021. https://www.calwater.com/docs/uwmp2020/DOM_2020_UWMP_FINAL.pdf.

CalRecycle (California Department of Resources Recycling and Recovery). 2021a. "SWIS Facility/Site Activity Details: Carson Transfer Station & MRF (19-AQ-0001)." Accessed August 11, 2021. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3098?siteID=1451.

CalRecycle. 2021b. "SWIS Facility Site Summary: El Sobrante Landfill (33-AA-0217)." Accessed August 11, 2021. https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/2402.

CalRecycle. 2021c. "SWIS Facility Site Summary: Lancaster Landfill and Recycling Center (19-AA-0050)." Accessed August 11, 2021. https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/1035.

CalRecycle. 2021d. "SWIS Facility Site Summary: Azusa Land Reclamation Co. Landfill (19-AA-0013)." Accessed August 11, 2021. https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/3954.

CalRecycle. 2021e. "SWIS Facility Site Summary: Simi Valley Landfill and Recycling Center (56-AA-0007)." Accessed August 11, 2021. https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/1001.

CalRecycle. 2021f. "SWIS Facility Site Summary: Falcon Refuse Center (19-AR-0302)." Accessed August 11, 2021. https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/1500.

CDWR (California Department of Water Resources). 2020. Sustainable Groundwater Management Act 2019 Basin Prioritization, Process and Results. May 2020.

City of Carson. 2002. *Carson General Plan Environmental Impact Report*. Public Review Draft. SCH No 2001091120. Prepared by RBF Consulting. October 30, 2002.

LACSD (Los Angeles County Sanitation Districts). 2021. "Plant Performance: 2019 Annual Performance Data." Accessed August 19, 2021. https://www.lacsd.org/services/wastewatersewage/facilities/jwpcp/performance/default.asp.

Los Angeles County Public Works. 2020. Countywide Integrated Waste Management Plan, 2019 Annual Report, September 2020. https://dpw.lacounty.gov/epd/swims/ShowDoc.aspx?id=14372&hp=yes&type=PDF.

5 Other CEQA Considerations

This chapter of the Environmental Impact Report (EIR) for the proposed Imperial Avalon Mixed-Use Project (Project or proposed Project) has been prepared in compliance with California Environmental Quality Act (CEQA) Guidelines Section 15126.2. Therefore, this chapter discusses the following:

- Growth-Inducing Impacts (Section 5.1)
- Significant Irreversible Changes (Section 5.2)
- Significant and Unavoidable Impacts (Section 5.3)
- Effects Found Not to Be Significant (Section 5.4)

5.1 Growth-Inducing Impacts

As stated in Section 15126.2(e) of the CEQA Guidelines, an EIR is required to include a discussion of a project's growth-inducing effects. The CEQA Guidelines generally describes such effects as follows: (1) economic growth, population growth, or additional housing in the surrounding environment; (2) removal of obstacles to population growth (e.g., a major expansion of a wastewater treatment facility that allows for more construction in the service area); (3) increases in population that tax existing services requiring construction of new facilities that could cause significant environmental effects; and (4) characteristics of a project that would encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. These four factors are discussed below as they pertain to the Project.

(1) As explained throughout this EIR, the Project would increase land use intensity on the Project site and would result in an additional 988 net new housing units and 10,352 square feet of commercial space, the provision of which would directly increase City of Carson (City) residents and employment opportunities. As such, the Project would directly cause population growth, housing growth, and economic growth on the Project site and in the City in general. As explained in Section 4.11 (Population and Housing) of this EIR, the City's population was projected to increase from 93,600 persons in 2016 to 105,200 persons in 2045, an increase of 11,600 persons. The Southern California Association of Governments (SCAG) 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) "Connect SoCal Plan" estimates that the SCAG region's population is anticipated to increase from 18,832,000 persons in 2016 to 22,504,000 persons in 2045, an increase in 3,672,000 persons (SCAG 2020).

Once operational, the proposed 1,213 units associated with the Project would generate approximately 3,043 residents, with 2,669 residents assumed to be new to the City. The Project would also add approximately 24 new employees (further discussed herein), but these employees are expected to be current residents of the City. The population growth anticipated to occur as a result of the Project (2,669 persons) represents 23% of the City's projected population growth for 2016 to 2045, and 0.09% of the SCAG region's projected population growth in the same time period. Therefore, the Project would not exceed the projected growth for the City between 2016 and 2045. In addition, the Project's 1,213 residential units would contribute to the City's Housing Element objectives and policies as well as the state-mandated Regional Housing Needs Assessment goals. Based on SCAG's growth projections for housing, the number of households in the City is anticipated to increase from 25,500 households in 2016 to 30,700 households in 2045, an increase of 5,200 households. The number of households in the SCAG region is anticipated to increase from 6,012,000 in 2016 to 7,633,000 in 2045, an increase of 1,621,000 households. The Project's net new 988 dwelling units would represent 19% of the 5,200 households projected to be added

to the City between 2016 and 2045, and 0.07% of the SCAG region's projected increase in housing from 2016 to 2045.

With regards to the new employment opportunities created by the Project, the projected number of jobs in the City is anticipated to increase from 63,400 in 2016 to 70,000 in 2045, for an increase of 6,600 jobs. As previously discussed, the Project would generate approximately 24 new employment opportunities. Based on SCAG's projected employment growth, the Project's anticipated 24 employees would represent approximately 0.36% of the 6,600 jobs that are expected to be added in the City between 2020 and 2045. The number of jobs in the SCAG region is anticipated to increase from 8,389,000 in 2016 to 10,049,000 in 2045, an increase of 1,660,000 jobs. The 24 jobs that would be added to the region as part of the Project would represent 0.0014% of the anticipated increase in jobs in the SCAG region. Additionally, the Project would generate part-time and full-time jobs associated with the construction of the Project between the start and end of construction. Construction of the Project is anticipated to occur over a period of approximately 5 years. However, given the relatively temporary nature of the construction period, the demand for construction employment would likely be met within the existing and future labor market in the City and in Los Angeles County. If construction workers reside outside of the City, these workers would likely commute to the Project site during the temporary construction period. The construction employment generated by the Project is not expected to increase the residential population of the City and would not induce growth in the City or region.

Due to the mixed-use nature of the Project, the Project would not cause an imbalance among jobs, housing, and population. Additionally, due to the City being considered a "jobs rich" area, additional housing would improve the jobs-to-housing ratio. As such, while the Project would result in some growth, this growth would be minor and is not expected to foster the construction of additional housing or other types of growth in the surrounding environment.

(2) The Project would not remove obstacles to population growth. Projects that physically remove obstacles to growth, or projects that indirectly induce growth, are those that may provide a catalyst for future unrelated development in the area. The Project would not require the expansion of domestic water, sanitary sewer, or stormwater drainage infrastructure into areas not previously served by such utilities, as the Project would be adequately served by existing infrastructure in the Project area. Additionally, given the Project site and surrounding area are already served by existing wet and dry utilities, it is unlikely that the Project would tax existing community service facilities or require construction or expansion of new regional-scale facilities with capacity to serve more than just the Project. Further, the Project would not extend an existing roadway facility into an area that does not currently provide vehicular access; thus, the Project would not result in indirect population growth by providing vehicular access to an area presently lacking such access.

(3) The residents and employees at the Project site would place increased demands on existing community services, such as fire protection, police protection, schools, libraries, and utilities. However, the Project would not increase such demands to the extent that it would require new or expanded facilities or infrastructure. Substantiation for this conclusion is provided in Section 4.12, Public Services and Recreation, and Section 4.14, Utilities and Service Systems, of this EIR. The growth associated with the Project falls within the population and housing growth identified for the region in the SCAG RTP/SCS. Growth projections in the RTP/SCS are used in part for infrastructure planning and development, to ensure that regional infrastructure is properly sized and planned for expected development. As such, because the population and housing growth associated with the Project falls within growth projections, it is expected that existing and planned infrastructure would accommodate the Project. As such, while the Project would cause some population growth, it is not expected to result in the construction of new facilities or infrastructure that would cause environmental effects.

(4) Approval of the Project is not expected to encourage or facilitate other activities that could significantly affect the environment. The Project site is surrounded by existing urban development. The Project would require approval of a General Plan Amendment and approval of a new Specific Plan, primarily to allow for the construction of residential land uses and increased density at the Project site. Furthermore, as with the Project, any other new development projects in the City would be subject to environmental review under CEQA. For any significant environmental effects that are identified, mitigation measures, Project alternatives, or the identification of overriding considerations would be required pursuant to CEQA. Additionally, projects would be subject to discretionary review and approval by City decision makers.

Large development projects, particularly in undeveloped or sparsely developed areas, have the potential to induce or accelerate development in surrounding areas, as new businesses and/or residential developers seek to situate development in new opportunity areas where there is a shortage of services and/or housing. However, the Project would be located within an urbanized metropolitan area that supports a wide variety of existing services, businesses, and housing options. While the Project would introduce new dwelling units and new commercial space to the City, the number of dwelling units and the amount of commercial space would be consistent with the SCAG projections for population and housing in the region through the planning horizon year of 2045. For these reasons, the new businesses and housing units associated with the Project are not expected to directly induce or accelerate growth in the surrounding areas.

In conclusion, the Project would cause economic growth, population growth, and housing growth. However, the growth would be limited to the Project site itself and falls well within City and regional growth projections for population and housing. The Project would not remove obstacles to population growth and would not cause an increase in population such that new community facilities or infrastructure would be required outside of the Project. Lastly, the Project is not expected to encourage or facilitate other activities that could significantly affect the environment, as explained above. For these reasons, the Project is not considered to be significantly growth-inducing.

5.2 Significant Irreversible Changes

The CEQA Guidelines (14 CCR 15000 et seq.) require an EIR to address any significant irreversible environmental changes that would result from the Project should it be implemented. Pursuant to Section 15126.2(d), an impact would fall into this category if (14 CCR 15126.2[d]):

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of the project would generally commit future generations of people to similar uses;
- The project involves uses in which irreversible damage from environmental accidents could result;
- The proposed consumption of resources is not justified (e.g., the project results in wasteful use of energy).

Determining whether the Project may result in significant and irreversible effects requires a determination of whether key resources would be degraded or destroyed in such a way that there would be little possibility of restoring them.

5.2.1 Change in Land Use that Commits Future Generations to Similar Uses

The Project site is currently developed with the 228-space, Imperial Avalon Mobile Estates mobile home park (Mobile Home Park). The existing General Plan designation for the Project site is Regional Commercial (east) and Low Density Residential (west), and the existing zoning for the Project site is Commercial, Automotive (east) and RM-8-D zone (west). The Project site is surrounded on all sides by developed properties. Immediately north of the Project site is a concrete-lined channel. The area north of the channel is the District Specific Plan Area. The land uses to the east of South Avalon Boulevard includes an auto dealership site. The parcel located adjacent to the southern boundary of the Project site is occupied by an auto dealership use, and single- and multi-family residential uses. The land uses to the west of Grace Avenue are single-family residential uses. Since the Project site is located near and adjacent to existing residential, commercial, and similar urbanized uses, the Project would not result in land use changes that would commit future generations to uses that are not already prevalent in the Project area. The Project's proposed land use mix—residential, commercial, and recreational—already occur in the immediate and broader Project area, and thus, implementation would not commit future generations to similar uses, given that this proposed land use mix is already found throughout the City.

5.2.2 Irreversible Damage from Environmental Accidents

Potential environmental accidents of concern include those events that would adversely affect the environment or public due to the type or quantity of materials released and the receptors exposed to that release. Demolition and construction activities associated with the Project would involve some risk of environmental accidents. However, these activities would be conducted in accordance with all applicable federal, state, and local regulations, and would follow professional industry standards for safety. Once operational, any materials associated with environmental accidents would comply with applicable federal, state, and local regulations. Use of any such materials would not adversely affect the environment or public due to the type or quantity of materials released and the receptors exposed to that release.

5.2.3 Commitment of Nonrenewable Resources/ Consumption of Resources Justified

Commitment of nonrenewable resources includes issues related to increased energy consumption, loss of agricultural lands, and lost access to mining reserves. There would be an irretrievable commitment of labor, capital, and materials used during construction and operation of the Project. Nonrenewable resources would primarily be committed in the form of fossil fuels such as fuel, oil, natural gas, and gasoline used by equipment associated with construction of the Project. Consumption of other non-renewable or slowly renewable resources would also occur. These resources would include lumber and other forest products, sand and gravel, asphalt, and metals such as steel, copper, and lead.

To ensure that energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (Public Resources Code Section 21100[b][3]). Energy conservation implies that a project's cost-effectiveness be reviewed not only in dollars but also in terms of energy requirements. For many projects, cost-effectiveness may be determined more by energy efficiency than by initial dollar costs. A lead agency may consider the extent to which an energy source serving the project has already undergone environmental review that adequately analyzed and mitigated the effects of energy production.

Consistent with both Public Resources Code Section 21100(b)(3), Appendices F and G of the CEQA Guidelines, and a ruling set forth by the court in *California Clean Energy Committee v. City of Woodland*, potentially significant energy implications of a project must be considered in an EIR to the extent relevant and applicable to the project. Accordingly, based on the energy consumption thresholds set forth in Appendix G of the CEQA Guidelines, the Project's estimated energy demands (both short-term construction and long-term operational demands) were evaluated (see Section 4.4, Energy, of this Draft EIR). The overall purpose of the energy analysis was to evaluate whether the Project would result in the wasteful, inefficient, or unnecessary consumption of energy.

As further assessed in the energy analysis, for new development such as that proposed by the Project, compliance with California Title 24 energy efficiency requirements is considered demonstrable evidence of efficient use of energy. The Project would provide for and promote energy efficiencies beyond those required under other applicable federal and state standards and regulations, and in so doing would meet or exceed all Title 24 standards. Additionally, energy consumed by the Project would be comparable to, or potentially less than, energy consumed by other mix-use residential/commercial projects of similar scale and intensity. On this basis, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy.

In addition to the above considerations, state and local laws and regulations would further reduce the Project's use of nonrenewable resources over time. Specifically, electricity consumed at the Project site would be increasingly sourced from renewable energy, pursuant to Senate Bill 100. Senate Bill 100, which passed in 2018, states that 44% of the total electricity sold to retail customers in California per year must be secured from qualifying renewable energy sources by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. Senate Bill 100 also sets forth a state policy that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California and requires that achieving 100% zero-carbon electricity does not increase carbon emissions elsewhere in the western grid or is not fulfilled through resource shuffling. As such, the Project's consumption of nonrenewable energy is anticipated to significantly decrease over time, as Senate Bill 100 is implemented statewide and overall nonrenewable energy consumption decreases.

Similarly, the vehicles that would travel to and from the Project would be subject to increasingly stringent emissions standards over time, which would reduce the amount of fossil fuel consumed per vehicle (see Section 4.5, Geology and Soils, for additional details). Furthermore, the state has policies in place to support decreased use of personal vehicles, to be replaced with alternative modes such as transit, walking, and biking. These policies are incentivized at the local level by the proposed Project's provision of alternative transportation amenities (e.g. pedestrian pathways and bicycle parking). As such policies are carried out, the number of vehicles traveling to and from the site may decrease over time.

The Project would be subject to compliance with the California Building Energy Efficiency Standards and the California Green Building Standards Code (CALGreen). In conclusion, while the proposed Project would result in the use of nonrenewable resources, such use would be limited primarily to building materials, fossil fuels, and water. During operation, use of such resources is expected to decrease, as increasingly stringent efficiency requirements are implemented at the local and state level.

While the Project would result in increased resource consumption during construction and operation, the Project would also result in some benefits related to long-term resource consumption in the region. As demonstrated in Section 4.12, Population and Housing, of this EIR, growth in population, housing, and employment is expected to occur in the City, in the County, and throughout the southern California region into the foreseeable future. The proposed Project falls well within regional growth projections for population and housing and would locate this growth on an infill site within walking distance of a wide range of services, employment opportunities, commercial uses, and existing residential neighborhoods. Regarding population growth, SCAG estimates that the County would

have 10,407,000 residents by 2020, 11,174,000 residents by 2035, and 11,674,000 residents by 2045 (SCAG 2020). The Project's increase in population would provide a nominal amount of population growth of the County's estimated projections through 2045. Additionally, the proposed Project's population growth would represent nominal percentage of SCAG's projected 1,267,000 new residents anticipated in the County between 2020 and 2045. Additionally, the Project would provide additional housing in an employment-rich urban center, thereby lowering the City's job-to-housing ratio to meet the projected value and provide greater housing opportunities for existing employees within the City.

The Project would help accommodate growth within existing developed areas, as opposed to accommodating growth through development in previously undeveloped areas. The latter development pattern generally results in permanent loss of naturalized lands and open space, as well as increased fossil fuel consumption attributable to longer commuting distances and lack of transit options. While the Project would result in some irretrievable commitment of nonrenewable resources, it would also help accommodate growth in a manner that would reduce irreversible environmental changes in the region. Furthermore, the irretrievable commitment of resources attributable to the Project would not be considered unusual when compared to typical urban infill development of the same size and scope. For these reasons, the irretrievable commitment of resources attributable to the Project would not be considered significant.

5.3 Significant and Unavoidable Impacts

Section 15126.2(c) of the CEQA Guidelines requires than an EIR describe any significant impacts which cannot be avoided. Specifically, Section 15126.2(c) states:

> Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.

As discussed in Chapter 4, Environmental Analysis, of this Draft EIR, at the project and cumulative levels, the Project would result in significant and unavoidable impacts related to short-term construction noise. For all other environmental issue areas, the Project would result in no impact or impacts that are either less than significant or less than significant with mitigation incorporated.

5.4 Effects Found Not to Be Significant

Section 15128 of the CEQA guidelines requires that an EIR briefly describes potential environmental effects that were determined not to be significant and therefore were not discussed in detail in the EIR. As discussed in the Notice of Preparation, released on January 13, 2021, implementation of the Imperial Avalon Specific Plan is not expected to result in any significant impacts to Agriculture and Forestry Resources, Biological Resources, Mineral Resources, and Wildfire. A summary of the analysis provided in the Notice of Preparation for these issue areas is provided in the following text.

Agriculture and Forestry Resources

The Project site is located in a highly developed part of the City, with the vast majority of the area containing paved surfaces and manmade structures. No readily available opportunities for agricultural or forestry operations exist on

site or in the surrounding area. According to the California Department of Conservation's California Important Farmland Finder, most of Los Angeles County, including the City of Carson, is not mapped as part of the state's Farmland Mapping and Monitoring Program; thus, the Project site does not contain Prime Farmland, Unique Farmland, or Farmland of State Importance (collectively "Important Farmland") (DOC 2020), nor does it contain any parcels under a Williamson Act contract (DOC 2018). Additionally, according to the land cover map produced by the California Department of Forestry and Fire Protection, neither the Project site nor the surrounding area are identified as forestland or timberland. Therefore, impacts associated with agricultural and forestry resources would not occur.

Biological Resources

Under the existing conditions, the Project site is predominantly developed with paved surfaces and manmade structures. A limited amount of landscape areas are located within the Project site and along the public rights-of-way contain ornamental trees, shrubs, and turf. This vegetation, which was planted in conjunction with the existing residential users and the City, is ornamental in nature, entirely surrounded by urban development, and does not form a cohesive plant community that would provide quality suitable habitat for candidate, sensitive or special-status wildlife species, or would support wildlife movement. Additionally, given these existing on-site conditions, wetlands or other jurisdictional waters are not found within the Project site (USFWS 2021). The Project would involve installation of a pedestrian bridge in the middle of the northern boundary of the Project site. The pedestrian bridge would extend beyond the Project site and cross over the concrete-lined Torrance Lateral Drainage Canal (which drains immediately into the Dominguez Channel, a jurisdictional feature) to connect with the park area that is contemplated as part of the proposed 2021 District at South Bay project. All components of the pedestrian bridge including all features needed to support the bridge, would be located above the 100-year flood zone and outside of the jurisdictional limits of this watercourse, which are clearly defined by the vertical concrete walls of the canal. No construction activities would occur within the canal and no waters or materials would be discharged into the canal. All construction activities would be conducted in accordance with the Project's Stormwater Prevention Pollution Plan to prevent potential pollutants from entering the waterway during construction. An aerial easement from the Los Angeles County Department of Public Works would be obtained to allow for the bridge construction and public use. Given that the bridge would not encroach on the jurisdictional limits of the waterway, the Project would have no impact on wetlands or other jurisdictional waters. Lastly, any development activities conducted pursuant to the Imperial Avalon Specific Plan would be required to comply with all applicable requirements set forth by the City, including the City's parkway tree preservation and protection regulations. Therefore, impacts associated with biological resources would not occur.

Mineral Resources

According to the City's General Plan, no known significant mineral resources are located within the City (City of Carson 2002). No mineral extraction activities occur on or adjacent to the Project site, and no known mineral resources are present on site. Thus, impacts associated with mineral resources would not occur.

Wildfire

Based on the California Department of Forestry and Fire Protection's Fire Hazard Severity Zones maps, the entire City, including the Project site, is not located in or near state responsibility areas or lands classified as Very High Fire Hazard Severity Zones (CAL FIRE 2020). Therefore, impacts associated with wildland fire would not occur.

5.5 References

CAL FIRE (California Department of Forestry and Fire Services). 2020. "Fire Hazard Severity Zone Viewer" [interactive map]. Accessed July 1, 2021. http://egis.fire.ca.gov/FHSZ/.

City of Carson. 2002. *City of Carson General Plan Environmental Impact Report: Volume II*. SCH no. 2001091120. Public Review Draft. Prepared by RBF Consulting. October 30, 2002. Accessed July 1, 2021 . http://ci.carson.ca.us/content/files/pdfs/planning/generalplan/EIR.pdf.

DOC (California Department of Conservation). 2018. The Williamson Act Status Report 2016-17. Released 2018. Accessed July 1, 2021 https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports /2018%20WA%20Status%20Report.pdf.

DOC. 2020. "California Important Farmland Finder" [interactive map]. Accessed July 1, 2021. https://maps.conservation.ca.gov/dlrp/ciff/.

SCAG (Southern California Association of Governments). 2020. *Current Context: Demographics and Growth Forecast*. Connect SoCal. Adopted September 3, 2020. Accessed August 2021. https://scag.ca.gov /sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf ?1606001579.

USFWS (U.S. Fish and Wildlife Service). 2020. "National Wetlands Inventory, Wetlands Mapper." Accessed July 1, 2021. http://www.fws.gov/wetlands/Data/Mapper.html.

6 Alternatives

The California Environmental Quality Act (CEQA) requires that Environmental Impact Reports (EIRs) "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the project objectives, would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (14 CCR 15126.6[a]). The CEQA Guidelines direct that the selection of alternatives be governed by "a rule of reason" (14 CCR 15126.6[a] and [f]). As defined by the CEQA Guidelines:

> The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the Lead Agency determines could feasibly attain most of the basic objectives of the project (14 CCR 15126.6[f]).

As presented in prior sections of this EIR, the proposed Imperial Avalon Mixed-Use Project (Project) would result in a significant and unavoidable impact with respect to construction noise. The Project would result no impact, less than significant impact, or less than significant impact with mitigation incorporated for all other resources topics evaluated.

Consistent with CEQA, the analysis presented in this chapter considers whether a reasonable range of alternatives to the Project could reduce construction noise impacts as well as meeting Project objectives. The selection of alternatives and their discussion must "foster informed decision making and public participation" (14 CCR 15126.6[a]). Therefore, this chapter identifies potential alternatives to the Project and evaluates them, as required by CEQA.

6.1 Proposed Project and Project Objectives

As described in the following discussion, a project's objectives and the significant impacts of a project are key determiners of the alternatives that are initially examined by the lead agency and the alternatives that are ultimately carried forward for detailed analysis in an EIR. To that end, this subsection includes a summary of the Project's characteristics to facilitate comparison between the Project and its alternatives, the list of Project objectives, and a summary of the Project's significant impacts.

The Project involves the adoption of the Imperial Avalon Specific Plan (IASP), which would establish a new regulating plan within the IASP area (Project site) and allow for the development of residential, commercial, recreational, and open space uses, as well as implementation of the IASP through the development of a specific development proposal, which involves demolition of existing on-site structures and the development of a mixed-use neighborhood containing multifamily residences, townhomes, neighborhood-serving commercial uses, open space and recreation opportunities, and associated parking areas. Table 6-1 includes a summary of the major elements of the development proposal.

Table 6-1. Project Buildout Summary

Metric	Project Information
Project Site	1,189,739 square feet (27.31 acres)
Apartments – Non-Age Restricted	653 units

Table 6-1. Project Buildout Summary

Metric	Project Information
Apartments – Senior	180 units (assuming build out of maximum density)
Townhomes	380 units
Total Residential	1,213 units
Commercial Area	10,352 square feet
Residential Parking	2,026 stalls
Commercial Parking	18 stalls
Publicly Accessible Park Space	21,300 square feet

Notes: All measurements, square footages, and building area ratios provided in this table are approximated.

The Project objectives assist the City of Carson (City) in developing a reasonable range of alternatives to be evaluated in the EIR. The Project's specific objectives are as follows:

1. Create a vibrant, new residential neighborhood with neighborhood-serving commercial uses and open-space amenities that furthers the land use, economic development, and urban design goals of the General Plan.
2. Provide new market rate and affordable housing opportunities and potential senior, age-restricted senior units across a mixture of housing products.
3. Assist the City of Carson in meeting its Regional Housing Needs Assessment (RHNA) goals and diversify the City's housing stock and improve the local jobs/housing imbalance.
4. Reduce automobile trips by creating a mixed-use, pedestrian-oriented environment with residences and commercial uses near employment opportunities, recreational facilities, and publicly accessible open space within the City's core and in an area that is served by multiple transit lines.
5. Facilitate pedestrian and bike connectivity between historically disconnected areas within the City through the development of a pedestrian bridge over the Torrance Lateral Drainage Canal, linking the Project site with The District Specific Plan Area and in particular, the Carson Country Mart area (approved under the District at South Bay 2021 project). Providing a connection between the Project site and the District Specific Plan Area would further increase the supply of services, employment opportunities, recreational facilities, and publicly accessibly open space that is available within walking and biking distance to future residents in the area.

6.2 Alternatives Considered and Eliminated During the Project Planning Process

The CEQA Guidelines provide that this EIR should "identify any alternatives that were considered by the Lead Agency but were rejected as infeasible during the Project planning process and briefly explain the reasons underlying the Lead Agency's determination" (14 CCR 15126.6[c]). The following is a discussion of the Project alternatives considered during the planning process and the reasons they were not selected for detailed analysis in this EIR. Alternatives that were considered for further analysis, including a no project alternative, are discussed in Section 6.3.

Alternative Sites

CEQA does not require that an analysis of alternate sites always be included in an EIR. However, if the surrounding circumstances make it reasonable to consider an alternate site, then a project alternative should be considered and analyzed in the EIR. Pursuant to CEQA Guidelines Section 15126.6(f)(2), in making the decision to include or exclude

analysis of an alternate site, the "key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR."

Alternative sites were ultimately rejected from further analysis in the EIR due to infeasibility, failure to meet Project objectives and inability to avoid significant environmental impacts, as discussed in the following subsections.

Infeasibility. A search for other suitable sites for Project development was conducted. However, the City is highly urbanized and is largely built out. A search of similarly sized, available properties within a 10-mile radius of the City failed to find any 25- to 35-acre sites that are currently on the market and available to purchase (LoopNet 2022). While not currently for sale, the area immediately north of the Project site (i.e., the area within the District Specific Plan Area could potentially be suitable for development of a mixed-use project. However, this area has already been the subject of an approved specific plan and several development proposals are currently in advanced planning stages, including a proposal recently approved by the City Council on May 23, 2022 amend the District Specific Plan to accommodate a proposed project including light industrial, commercial and recreational/open space land uses. These active development proposals would further complicate the feasibility of obtaining the rights to develop the Project within this area. Given that the Project Applicant does not have the right to develop other sites and no sites are currently available, obtaining another site of a similar size and similar location is not considered feasible.

Failure to Meet Objectives. Use of alternative sites would fail to achieve several of the Project objectives, which are dependent on the specific location of the Project. The Project site is located in the City's core and is served by multiple transit lines and therefore meets the objective of reducing automobile trips by creating a mixed-use, pedestrian-oriented environment with residences and commercial uses near employment opportunities, recreational facilities, and publicly accessible open space. The site also meets the highly location-specific Project objective of facilitating pedestrian and bike connectivity through the development of a pedestrian bridge over the Torrance Lateral Drainage Canal, which would link the Project site with the District Specific Plan Area. Finding another site within the City's core that would have been in close enough proximity to the District Specific Plan Area to facilitate pedestrian and bike connectivity between the two areas was not considered feasible, and an alternative site would therefore not link the Project site to the District Specific Plan Area and would not increase the supply of services, employment opportunities, recreational facilities, and publicly accessibly open space that is available within walking and biking distance to future residents in the area. Based on the foregoing, implementation of the Project on an alternative site would not meet the Project's objectives.

Environmental Impacts. The Project would result in a significant environmental impact related to short-term, on-site construction noise due to the predicted magnitude of construction noise and the proximity of off-site sensitive receptors. Moving the Project to a different site could potentially lessen this significant impact depending on the distance to sensitive receptors; however, due to the built-out nature of the City, it is unlikely that construction noise impacts would be lessened or avoided, as suitable sites for residential development typically tend to be proximate to other residential developments, which are widely distributed throughout the City. As such, moving the Project to a different site is not anticipated to avoid or substantially lessen the Project's sole significant and unavoidable impact.

Increased Intensity Alternative

The Increased Intensity Alternative, which would include all multifamily rental housing instead of a mix of multi-family and owned townhomes, was considered. Similar to the Project, this Alternative would require a General Plan Amendment and a Zoning Amendment and include the preparation and adoption of a specific plan. The Increased

Intensity Alternative would have included a greater number of overall multifamily rental units that could provide additional flexibility and opportunity to accommodate a larger range of multifamily housing types (such as senior housing) and the potential to satisfy more of the IASP-required affordable housing units on site. However, the Increased Intensity Alternative would not fulfill a key component of the Project objectives, specifically, to provide a mixture of housing products (such as multifamily for-sale condominium units) (Objective 2). Additionally, the single housing product type proposed under this alternative (i.e., multi-family rental housing), would introduce an abrupt shift in residential types when compared to the existing single-family residential neighborhood immediately west and south of the Project site. The proposed Project proposes a significant townhome component that would be located on the western side of the development to provide a more sensitive transition to the existing single-family homes to the west and south of the Project. Removal of the townhome component would eliminate the purposeful inclusion of townhomes to provide a transition from the Project's new community to adjacent single-family uses and also would not provide a mix of housing products (Objective 2). This alternative was therefore rejected from further analysis in the EIR due to failure to meet Project objectives, failure to provide a transition between the Project site and the adjacent residential land uses, and failure to reduce environmental impacts, as discussed in greater detail in the following summary.

Failure to Meet Objectives. While it would be technically feasible to develop an increased intensity project including entirely multifamily rental housing, this alternative would not meet the Project objective of providing new market rate and affordable housing opportunities across a *mixture* of housing products that will assist the City in meeting its RHNA goals and diversify the City's housing stock. While a development containing entirely multifamily rental housing would assist in providing new housing opportunities, it would result in a less diverse mix of housing products than the Project.

Environmental Impacts. The Project would result in a significant environmental impact related to short-term, on-site construction noise. Construction of an entirely multifamily rental development would likely have substantially similar construction and operational impacts to the Project for most resource areas evaluated. However, an Increased Intensity Alternative would result in an increase in the number of multifamily units, along with an expected increase in the number of residences, would correspond with an increase in total trips generated. This would result in an increase in total vehicle miles traveled (VMT). An increase in VMT would result in an increase in air quality, greenhouse gas (GHG), and energy use impacts, based on the direct correlation between additional VMT and the emissions/energy use that would result. An increase in total trips would also correlate with increased off-site roadway noise impacts associated with residents accessing the Project site, which could be significant for surrounding off-site receptors along access routes, such as residences along Grace Street, west of the Project site. The Increased Intensity Alternative would also not reduce the Project's significant and unavoidable construction noise impact, as similar—if not greater due to the increased size of buildings—construction activities would still occur on the Project site in the same locations as would occur for the Project. As such, the Increased Intensity Alternative would not avoid or substantially lessen any of the significant impacts of the Project and could result in new potentially significant impacts.

All Commercial Alternative

An All Commercial Alternative, which would consist entirely of commercial uses with no residential component, was considered. Other components such as the inclusion of publicly accessible open spaces and a pedestrian bridge over the Torrance Lateral Drainage Canal would be the same as the Project. Like the Project, the All Commercial Alternative would require a General Plan Amendment and a Zoning Amendment and include the preparation and adoption of a specific plan. Assuming a development intensity of 0.32 square feet of floor area per acre (consistent with the average for commercial space in the City [City of Carson 2004]), this Alternative would theoretically involve the development of 380,680 square feet of commercial space. A shopping center use was assumed for the

evaluation of this alternative. This alternative was rejected from further analysis in the EIR due to failure to meet Project objectives, particularly the lack of inclusion of residences (Objectives 1, 2, 3, and 4), and failure to reduce environmental impacts, as discussed in the following summary.

Failure to Meet Objectives. While it would be technically feasible to develop an entirely commercial project, this alternative would fail to meet many of the Project objectives. The All Commercial Alternative would not create a vibrant, new residential neighborhood provide new market rate and affordable housing opportunities across a mixture of housing products, or assist the City of Carson in meeting its RHNA goals and diversity the City's housing stock because it would not contain a residential housing component (Objectives 1, 2, and 3). It would also not reduce automobile trips by creating a mixed-use, pedestrian-oriented environment with residences and commercial uses near employment opportunities, recreational facilities, and publicly accessible open space within the City's core and in an area that is served by multiple transit lines because it would not be a mixed-use development with a residential component (Objective 4).

Environmental Impacts. The Project would result in a significant environmental impact related to short-term, on-site construction noise. Construction of the All Commercial Alternative would likely have similar construction impacts to the Project and would not avoid this significant and unavoidable impact. However, with regard to operation, an All Commercial Alternative would result in an increased number of trips compared to the proposed Project. The proposed Project includes 380 townhomes, 653 multifamily housing dwelling units, 180 senior adult housing dwelling units (assuming maximum build out), and 10,352 square feet of commercial space. As discussed in the Local Transportation Assessment (Appendix I), the proposed Project would result in a total of 6,727 daily gross trips. By comparison, using trip generation rates from the Institute of Transportation Engineers Trip Generation Manual, 10th Edition, an All Commercial Alternative (Institute of Transportation Engineers Land Use Code 820) would generate 14,089 daily gross trips. This increase in trips to and from the Project site would result in increased traffic on the local circulation system and would result in far greater (i.e., at least two times as many) air pollutant and greenhouse gas emissions from mobile sources (i.e., vehicles accessing the Project site). The increase in trips would also result in greater levels of roadway traffic noise and energy use. As such, the All Commercial Alternative would not avoid or substantially lessen any of the significant impacts of the Project and could potentially result in new significant noise and transportation impacts. It would also not accomplish many of the Project objectives, namely, creating a vibrant, new residential neighborhood (Objective 1), providing new housing opportunities (Objective 2), assisting the City in meeting its RHNA goals (Objective 3), and reducing automobile trips (Objective 4). As such, an All Commercial Alternative was rejected for further analysis.

6.3 Alternatives Selected for Further Analysis

Pursuant to Section 15126.6 of the CEQA Guidelines, the City selected a reasonable range of alternatives to the Project that would feasibly attain most of the basic objectives of the Project, but would avoid or substantially lessen one or more of the significant effects of the Project. As previously discussed, the Project would result in a significant and unavoidable environmental effect related to construction noise, and therefore, an evaluation of potential alternatives is required to avoid or substantially lessen any such effects. Three alternatives, as presented, have been carried forward for further analysis. Pursuant to Section 15126.6(d) of the CEQA Guidelines, sufficient information about each alternative has been included in the following descriptions to allow meaningful evaluation, analysis, and comparison with the Project.

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment, the discussion of alternatives is required to focus on alternatives to the Project or its location that are

capable of avoiding or substantially lessening any significant effects of the Project, even if these alternatives would impede to some degree the attainment of the Project objectives, or would be more costly. This section discusses a reasonable range of alternatives to the Project, including a no project alternative in compliance with CEQA Guidelines Section 15126.6(e). These alternatives are as follows:

- Alternative 1A – No Project and Non-Operational Mobile Home Park Alternative
- Alternative 1B – No Project and Mobile Home Park Removal Alternative
- Alternative 2 – General Plan and Zoning Consistent Alternative
- Alternative 3 – Reduced Density and Sensitive Transition Alternative

See below for a summary comparison of the environmental effects of the Project to the alternatives presented in this section.

6.3.1 No Project Alternatives

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate the specific alternative of "no project" along with its impact(s). As stated in this section of the CEQA Guidelines, the purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the Project with the impacts of not approving the Project. As specified in Section 15126.6(e)(3)(B) of the CEQA Guidelines, the no project alternative for a development project consists of the circumstance under which a proposed project does not proceed. Section 15126.6(e)(3)(B) further states that "in certain instances, the no project alternative means 'no build' wherein the existing environmental setting is maintained." Given that the Mobile Home Park has been closed through an approval process independent of the Project, two "no project" alternatives were analyzed. These no project alternatives include Alternative 1A, the No Project and Non-Operational Mobile Home Park Alternative, which would involve no specific plan adoption or development and no further actions such as coach removal, and Alternative 1B, the No Project and Mobile Home Park Removal Alternative, which would involve no specific plan adoption and closure of the Mobile Home Park, including coach removal. These no project alternatives are discussed in greater detail below.

6.3.1.1 Alternative 1A – No Project and Non-Operational Mobile Home Park Alternative

Alternative 1A assumes the Project would not proceed, no new permanent development or land uses would be introduced within the Project site, and the existing environment would be entirely maintained. No further actions would occur on the Project site, such as coach removal or demolition of existing structures and facilities. The existing Mobile Home Park would continue to occupy the Project site but would become non-operational and unoccupied, as the Park Owner has already begun the process of closing the Park (see Section 3.3, Environmental Setting, in Chapter 3, Project Description, for further detail). Minimal maintenance and security activity at the Park is assumed after closure.

Ability to Meet Project Objectives

Alternative 1A would not achieve any of the Project objectives. It would not create a new residential neighborhood (Objective 1), provide new market rate and affordable housing opportunities across a mixture of housing products (Objective 2), or assist the City in meeting its RHNA goals and diversifying the City's housing stock because it

would not develop any housing products at the Project site (Objective 3). It would not create a pedestrian-oriented environment with residences and commercial uses near employment opportunities, recreational facilities, and publicly accessible open space within the City's core and in an area that is served by multiple transit lines (Objective 4). Lastly, it would not facilitate pedestrian and bike connectivity between historically disconnected areas within the City through the development of a pedestrian bridge over the Torrance Lateral Drainage Canal, linking the Project site with the District Specific Plan Area, and further increasing the supply of services, recreational facilities, and publicly accessibly open space that is available within walking and biking distance to future residents in the area (Objective 5). Alternative 1A would not construct the pedestrian bridge or develop facilities that would create employment opportunities or include service-oriented facilities, recreational facilities, or publicly accessible open spaces.

Comparison of the Effects of Alternative 1A to the Proposed Project

Construction impacts associated with the Project would be avoided because no development would occur on the Project site under Alternative 1A. The existing Mobile Home Park coaches, structures, and facilities would remain in place. However, operation of the Park would cease, as a Relocation Impact Report (RIR) has already been approved by the City Council and the Park Owner has proceeded with the closure of the Mobile Home Park. As such, Alternative 1A would result in a vacant and unused mobile home park within the City's core. There would be no potential construction-related impacts to any tribal cultural resources or unique paleontological resource or geologic feature that may be present on site. Construction-related air quality impacts, noise impacts (including the Project's significant and unavoidable short-term construction noise impact), traffic impacts, and energy consumption impacts would also be avoided since construction activities associated with the Project would not occur on the site.

Operational impacts associated with the Project would be mostly avoided since no development at the Project site would occur. The height, massing, and lighting of buildings on the Project site would remain. As such, no aesthetic impact related to development of new facilities would result. However, the presence of a vacant mobile home park after the Mobile Home Park is closed could create an undesirable aesthetic environment in both the short and long-term. The number of vehicle trips to/from the Project site would be eliminated once closure of the Mobile Home Park is complete, with the exception of occasional trips for maintenance, security, and nuisance abatement. Thus, mobile emissions, vehicular noise, traffic, or petroleum consumption would be virtually eliminated. Water usage, sewage generation, and need for other public services and utilities would also be eliminated with Alternative 1A . The existing use is in conflict with existing zoning and land use designations. Under Alternative 1A, no General Plan Amendment or specific plan would be approved, and the existing land use conflict would remain (i.e., a vacant mobile home park would exist on a site that is zoned Commercial, Automotive and RM-8-D and designated by the City's General Plan for Regional Commercial and Low Density Residential uses). With the exception of failing to resolve the land use and zoning conflict associated with the existing use, Alternative 1B would result in decreased environmental impacts relative to the Project.

6.3.1.2 Alternative 1B – No Project and Mobile Home Park Removal Alternative

Alternative 1B assumes the Project would not proceed and no new permanent development or land uses would be introduced within the Project site but that additional actions associated closure of the Mobile Home Park closure would occur, such as coach removal and demolition of existing structures and facilities. It is assumed that coach pads and pavement would be left on site and the site would consist of a vacant, mostly paved lot. Minimal maintenance and security activity at the Park is assumed after closure.

Ability to Meet Project Objectives

Alternative 1B would not achieve any of the Project objectives. It would not create a new residential neighborhood (Objective 1), provide new market rate and affordable housing opportunities across a mixture of housing products (Objective 2), or assist the City in meeting its RHNA goals and diversifying the City's housing stock because it would not develop any housing products at the Project site (Objective 3). It would not create a pedestrian-oriented environment with residences and commercial uses near employment opportunities, recreational facilities, and publicly accessible open space within the City's core and in an area that is served by multiple transit lines (Objective 4). Lastly, it would not facilitate pedestrian and bike connectivity between historically disconnected areas within the City through the development of a pedestrian bridge over the Torrance Lateral Drainage Canal, linking the Project site with the District Specific Plan Area, and further increasing the supply of services, recreational facilities, and publicly accessibly open space that is available within walking and biking distance to future residents in the area (Objective 5). Alternative 1A would not construct the pedestrian bridge or develop facilities that would create employment opportunities or include service-oriented facilities, recreational facilities, or publicly accessible open spaces.

Comparison of the Effects of Alternative 1B to the Proposed Project

Construction impacts associated with the Project would be substantially reduced with Alternative 1B because the only activities that would occur would be associated with coach removal and demolition of existing structures and facilities. Operation of the Park would cease, as the City has already approved the RIR authorizing Mobile Home Park closure. As such, Alternative 1B would result in a vacant and undeveloped lot within the City's core. There would be no potential construction-related impacts to any tribal cultural resources or unique paleontological resource or geologic feature that may be present on site, as demolition activities would not disturb subsurface soils. Construction-related air quality, traffic, and energy consumption impacts would be substantially reduced due to the reduced scale of activity. Construction-related noise impacts would still occur, albeit to a lesser degree due to a lack of construction. However, as discussed in Section 4.10, Noise, demolition activities are still anticipated to result noise levels as high as 70.4 A-weighted decibels (dBA) L_{eq} at the nearest sensitive receptor. Even with implementation of Mitigation Measure (MM-)NOI-1 (noise best management practices) and MM-NOI-2 (sound barrier), the increase in ambient noise levels caused by demolition activities would result in a significant and unavoidable construction noise impact (residual noise levels would be 60.4 dBA L_{eq}, which exceeds the threshold of 60.1 dBA L_{eq}).

Operational impacts associated with the Project would be mostly avoided since no development at the Project site would occur. Demolition activities would result in vacant, unused lot within the City's core. While these conditions would not trigger an impact in the context of the thresholds of significance listed in Appendix G of the CEQA Guidelines, the presence of a vacant lot could create an undesirable aesthetic environment in both the short and long-term. The number of vehicle trips to/from the Project site would be eliminated once closure of the Mobile Home Park is complete, with the exception of occasional trips for maintenance and nuisance abatement. Thus, mobile emissions, vehicular noise, traffic, or petroleum consumption would be virtually eliminated. Water usage, sewage generation, and need for other public services and utilities would also be eliminated with Alternative 1B. The existing use is in conflict with existing zoning and land use designations. Under Alternative 1B, this non-conforming use would be eliminated, but no other permitted use would take its place. In summary, Alternative 1B would result in decreased environmental impacts relative to the Project and would substantially lessen but not eliminate the Project's significant and unavoidable construction noise impact.

6.3.2 Alternative 2 – Development Consistent with Existing General Plan/Zoning

Alternative 2 includes development of the Project site with uses consistent with the existing General Plan and zoning designations. The City's General Plan Land Use map designates the Project site as Regional Commercial (east) and Low Density Residential (west) (City of Carson 2015). Per the City's General Plan, Regional Commercial includes uses intended to serve a broad population base and offer a wide range of services to both the community and the region. Businesses in this designation include major department stores, specialty shops, other retail and service uses, automobile and other vehicle dealerships, and hotels and motels. Regional Commercial is intended to provide for the City's primary regional shopping center and its peripheral areas. Low Density Residential includes all residential areas composed of single-family detached dwellings and other development considered harmonious with such low-density residential development. The maximum density allowed is 8 dwelling units per acre (City of Carson 2004).

The corresponding zoning for the Project site is Commercial, Automotive (east), and RM-8-D zone (west) (City of Carson 2017). Automatically permitted uses under Commercial, Automotive zoning primarily consist of vehicle sales and service uses. Automatically permitted uses under RM-8 include single-family dwellings, mobile homes, religious group quarters, home community care facilities, single-room occupancy housing, supportive housing, transitional housing, and public elementary or secondary schools. Per the City's Zoning Code, "D" identifies a Design Overlay designation, created "primarily to provide for Site Plan and Design Review of future development within the designated areas in order to achieve special standards of design, architectural quality, style and compatibility, landscape treatment, and functional integration of neighboring developments."

The City is currently updating its General Plan, which is anticipated to be comprehensively updated with an accompanying EIR by late-2022. However, because the update is not complete, Alternative 2 relies on the existing zoning and land use designations at the time of this analysis.

Based on the existing land uses and zoning, the Project site could potentially support automotive sales uses and residential uses. As such, Alternative 2 has been developed to include construction and operation of a vehicle dealership (automobile or other vehicle such as motorcycles or recreational vehicles) with a service center on the eastern 12.1 acres of the site and construction and operation of single-family residential uses with a maximum density of 8 dwelling units per acre on the western 15.1 acres of the site. Using reference data from other auto dealerships within the City, it is anticipated that an auto dealership would have a floor area ratio of approximately 0.31, which would equate to an approximately 165,000-square-foot auto dealership. As the western portion of the site is approximately 15 acres, the maximum total number of dwelling units would be approximately 120. Alternative 2 would include the demolition of the existing Park on the site, previously approved for closure by the City Council. No General Plan Amendment, zone change, or specific plan would be required for Alternative 2. A pedestrian bridge would not be constructed. The signalization of the Grace Avenue/213th Street Intersection, would be unchanged from the Project.

Table 6-2 provides a summary of the unit counts and commercial square footage within this alternative, as well as a comparison to the Project.

Table 6-2. Comparison of Project to Alternative 2

Use	Project	Alternative 2	Delta vs. Project
Total Residential Unit Count	1,213	120	(1,093)
Total Commercial Space[1]	10,352	165,000	154,648

Notes: ( ) = negative value.

[1] Note that commercial space for the Project involves café and restaurant uses while commercial space for Alternative 2 involves an auto sales use.

In an effort to evaluate the potential environmental effects of Alternative 2 relative to the Project, the trip generation characteristics of this alternative were estimated using trip generation rates from the Institute of Transportation Engineers Trip Generation Manual, 10th Edition. A detailed trip generation table is provided in Appendix M. Table 6-3 provides a summary and comparison of trip generation estimates of the Project and Alternative 2.

Table 6-3. Trip Generation Summary and Comparison

Land Use	Daily	AM Peak Hour			PM Peak Hour		
		In	*Out*	*Total*	*In*	*Out*	*Total*
Project[1]	5,586	125	277	402	283	174	457
Alternative 2[2]	4,586	223	101	324	186	247	433
Net Difference	**1,000**	**+98**	**126**	**78**	**97**	**+73**	**24**

Sources:
1 Local Transportation Assessment (Appendix I).
2 Alternatives 2 and 3 Trip Generation Tables (Appendix M).

Ability to Meet Project Objectives

Alternative 2 would fail to achieve many of the Project objectives. It would not create a vibrant, new residential neighborhood with neighborhood-serving commercial uses, and open-space amenities that furthers the land use, economic development, and urban design goals of the General Plan (Objective 1). Because it would consist of only single-family dwelling units, it would not provide housing opportunities across a mixture of diverse housing products (Objective 2). Moreover, as Alternative 2 would be compliant with the underlying zoning, it would not involve a Development Agreement and there would be no legal mechanism for the City to secure an affordable housing benefit as with the Project (Objective 2). It would assist the City in meeting its RHNA goals, albeit to a lesser extent than the Project, but it would not assist the City in diversifying its housing stock (Objective 3). It would not reduce automobile trips by creating a mixed-use, pedestrian-oriented environment with residences and commercial uses near employment opportunities, recreational facilities, and publicly accessible open space within the City's core (Objective 4). Those respective features would also not be in an area that is served by multiple transit lines because it would not create a mixed-use development at the site (Objective 4). Lastly, it would not facilitate pedestrian and bike connectivity between historically disconnected areas within the City (Objective 5). A pedestrian bridge over the Torrance Lateral Drainage Canal would not be built. As such, the benefits of linking the Project site with the District Specific Plan Area and the approved Carson Country Mart would not be realized. The supply of services, employment opportunities, recreational facilities, and publicly accessibly open space available within walking and biking distance to future residents in the area would not be increased. This would also not provide the economic benefits that would be realized by connecting persons with the businesses, amenity areas, and dining opportunities within the Carson County Mart area.

Comparison of the Effects of Alternative 2 to the Proposed Project

The Project would have no impacts or less-than-significant impacts in all resource areas other than construction noise. The following analysis provides a comparison of the impacts of Alternative 2 relative to the Project.

Aesthetics

The aesthetics impacts of the Project were determined to be less than significant, as the proposed Project would not result in significant impacts with regard to scenic vistas, state scenic highways, conflicts with applicable zoning or

other regulations governing scenic quality, substantial light or glare, or cumulative aesthetic impacts (see Section 4.1, Aesthetics, for a detailed discussion of these impact determinations). Because there are no scenic vistas or state scenic highways in the vicinity of the Project site, Alternative 2 would similarly not result in significant impacts with regard to scenic vistas or state scenic highways. Alternative 2 would be required to be consistent with the development standards within the City's Municipal Code as required by California Planning and Zoning Law, and thus, would not result in conflicts with applicable zoning or other regulations governing scenic quality. Both the Project and Alternative 2 would also be required to comply with Municipal Code Section 9127.1, which requires that all exterior lighting installed on the Project site must be directed away from all adjoining and nearby residential property and arranged and controlled so it would not create a nuisance or hazard to traffic or to the living environment. For this reason, Alternative 2 would result in less than significant impacts with regard to light and glare. As such, Alternative 2 would result in the same less-than-significant aesthetics impacts as the proposed Project.

While Alternative 2 would result in the similar aesthetics impacts as the proposed Project in the context of the thresholds of significance listed in Appendix G of the CEQA Guidelines, Alternative 2 would involve less development by way of its reduced density, and the construction of smaller scale, single-family detached residential units in the western portion of the Project site along Grace Avenue.

The single-family residential units proposed under Alternative 2 would be of a much smaller height than the Project. Both the residential products proposed under the Project and Alternative 2 would feature a number of architectural treatments that would provide for a contemporary design with a form, proportion, and articulation that relates to similar architectural approaches throughout the urban areas of the City.

In summary, aesthetics impacts for Alternative 2 would be less than significant, the same as for the proposed Project, but would result in a development with less density, scale, and bulk relative to the Project.

Air Quality

Alternative 2 would involve less construction than the Project because less building area would be required when compared to the Project. As such, although construction-related air quality impacts under the Project were determined to be less than significant, they would be reduced under Alternative 2. During operation, trip generation would be lower for the uses proposed under Alternative 2 than for the Project, given that the Project would generate 1,000 fewer daily trips. A reduction of 1,000 trips reduction in building area would result in a corresponding reduction in air pollutant emissions from mobile sources (i.e., vehicles accessing the site), area sources (i.e., consumer products, architectural coating, and landscaping associated with residential units), and energy sources (i.e., electricity and natural gas demand). Although operation-related air quality impacts under the Project were determined to be less than significant, they would be reduced under Alternative 2. Although not significant for the Project, impacts to sensitive receptors would also be reduced under Alternative 2 because both construction and operational related emissions would be reduced. All other impacts related to air quality under Alternative 2, including consistency with applicable air quality plans and cumulatively considerable air quality impacts would be similar to or less than those under the Project and no mitigation would be required.

Cultural Resources and Tribal Cultural Resources

Alternative 2 includes similar ground disturbance on the same site as the Project, including excavation up to 45 feet below ground surface and into native soils. Excavation at such levels would be required for almost any redevelopment of the site because the existing subsurface of the site is not suitable to support structures as-is and requires excavation and recompaction (see Section 4.5, Geology and Soils, for additional detail). As such, impacts

related to cultural and tribal cultural resources under Alternative 2 would be similar to those under the Project. The Project includes Mitigation Measure TCR-1 to address potential impacts to tribal cultural resources, which would also be applicable to Alternative 2. As with the Project, with adherence to MM-TCR-1, Alternative 2's impacts would be less than significant. No additional mitigation would be required.

Energy

Although impacts related to energy use were determined to be less than significant for the Project, the uses proposed under Alternative 2 would be less energy-intensive than those under the Project. Transportation energy demand, electricity demand and natural gas demand would all be reduced under Alternative 2 due to the fact that Alternative 2 would result in 1,000 fewer daily trips than the proposed Project and a reduction in building area. Therefore, Alternative 2 would use less energy during operation than the Project. Additionally, because Alternative 2 would involve a reduced level of construction activities, construction-related energy use would also be reduced compared to the Project. All other impacts related to energy under Alternative 2 would be similar to or less than those under the Project and no mitigation would be required.

Geology and Soils

Alternative 2 involves construction of improvements and structures on the same site as the Project. Similar to the Project, Alternative 2 would be designed and constructed in accordance with the requirements of the California Building Code. As such, Alternative 2's impacts related to geology and soils would be similar to the Project. MM- PALEO-1 would be applicable to Alternative 2 to reduce potential impacts to paleontological resources. With application of MM-PALEO-1, impacts would be less than significant and no additional mitigation would be required.

Greenhouse Gas Emissions

As discussed under Air Quality, Alternative 2 would have reduced air emissions during both construction and operation compared to the Project due to the reduction in daily trips 1,000 fewer daily trips than the proposed Project) and building area. Accordingly, although not significant for the Project, Alternative 2 would also have reduced GHG emissions compared to the Project. The Project was determined to be consistent with applicable GHG plans, policies, and regulations. Because Alternative 2 would have lower GHG emissions than the Project, it would also be consistent with such plans, policies and regulations. Like the Project, no mitigation would be required.

Hazards and Hazardous Materials

Alternative 2 is assumed to involve operation of a vehicle dealership that includes a service center. Operation of a vehicle service center would involve the routine transport, use and disposal of larger quantities and a wider variety of hazardous materials than the Project, such as solvents, engine oil, transmission and brake fluid, antifreeze, refrigerants, paint, and batteries; these would create a greater hazard to the public and environment, from routine storage and daily use activities to a case of an accidental release. Through adherence to applicable regulations, these impacts would be addressed and still remain less than significant; however, they would be greater than the Project. Alternative 2 would also adhere to Project Design Feature (PDF) HAZ-1 during ground disturbing activities. All other impacts related to hazards and hazardous materials, including existing site contamination, emergency response and evacuation, and cumulatively impacts would be similar to the Project. No mitigation would be required.

Hydrology and Water Quality

Like the Project, Alternative 2 would adhere to the requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit during construction which would include preparation of and adherence to a Stormwater Pollution Prevention Plan, including best management practices to protect stormwater runoff. Like the Project, Alternative 2 would be subject to the requirements of the Municipal Separate Storm Sewer System (MS4) NPDES permit during operation, which sets limits on pollutants being discharged into waterways and requires all new development to incorporate low impact development features that are laid out in the 2014 Los Angeles County Low Impact Development Manual. Because Alternative 2 would be constructed on the same site as the Project and would adhere to all applicable requirements during construction and operation, Alternative 2 would have substantially similar impacts on hydrology and water quality to the Project. No mitigation would be required.

Land Use and Planning

The Project would include land use and zoning changes and the adoption of the IASP; Alternative 2 would be consistent with existing land use and zoning designations for the site and would not require any changes to zoning or land use designations or the adoption of a specific plan. However, though not necessarily in conflict with the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) Sustainable Communities Strategy (SCS) (SCAG 2020–2045 RTP/SCS), Alternative 2 would be less supportive of some of its goals, such as those related to equitable communities and diverse housing, than the Project. It would also be less supportive of some of the City's General Plan policies, such as the promotion of mixed-use development and the promotion and maintenance of a diversity of housing types and affordability. According to current planning and zoning regulations, Alternative 2 would still be less than significant and not require mitigation. However, the land uses proposed under Alternative 2 would overall be less aligned with City and regional goals promoting mixed-use development that supports a variety of housing types and affordability.

Noise

Alternative 2 would involve similar construction elements and duration when compared to the Project, albeit to a lesser degree due to the reduction in building area. As discussed in Section 4.10, short-term construction noise impacts for the Project would be significant and unavoidable due to the predicted magnitude of construction noise and the proximity of off-site sensitive receptors. Noise levels during the grading phase of Project construction are anticipated to result in noise levels as high as 114.3 dBA L_{eq}, which exceeds the construction noise threshold of 60.1 dBA L_{eq}. MM-NOI-1 and MM-NOI-2, which require measures to limit construction noise via best management practices and the placement of noise barriers along the Project site boundary near adjacent residences, would reduce this impact, but not to below a level of significance. Construction activities for Alternative 2 would generally be similar to the proposed Project and would require the use of construction equipment throughout the entire site, similar to the Project. Due to the necessity to use construction equipment throughout the entire site, Alternative 2 would not result in construction activities occurring further away from sensitive receptors. Given that similar construction activities would occur for Alternative 2 as the Project (and in the same locations), Alternative 2 would similarly result in significant and unavoidable short-term construction noise impacts. Implementation of MM-NOI-1 and MM-NOI-2 would be required to reduce the severity of this impact for Alternative 2, but not to below a level of significance. Nonetheless, while construction noise impacts would still be significant and unavoidable, they would be occurring for a shorter duration due to the reduction in building area that would require construction. As such, while construction noise impacts would be reduced in their severity, Alternative 2 would result in similar significant and unavoidable short-term construction noise impacts as the Project.

Section 4.10 also discussed other sources of noise that would be generated by the Project and the significance of their associated impacts. These noise sources are discussed below.

- **Construction Truck Trips.** Construction of the Project would require the use of heavy trucks accessing the Project site to deliver and remove construction materials and waste. With implementation of MM-NOI-3, which requires the routing of haul truck trips away from sensitive receptors and the limiting of haul truck deliveries to the same hours specified for construction equipment (between the hours of 7:00 a.m. to 8:00 p.m. on weekdays and Saturdays only), impacts associated with construction truck trips were determined to be less than significant. Alternative 2 would generally involve the same construction components as the Project, including similar, but possibly lessened (due to a reduction in building area), use of construction truck trips, and would result in similar, but possibly lessened, construction truck trip noise. With implementation of MM-NOI-3, construction truck trip noise impacts for Alternative 2 would be less than significant with mitigation incorporated, similar to the Project.
- **Roadway Traffic Noise.** The Project would result in traffic on adjacent roadways from daily activities, which would result in off-site roadway traffic noise. As discussed in Section 4.10, even with the addition of this traffic on the local roadway system, traffic noise levels would not exceed an increase of 5 dB or 3 dB, which are used as thresholds of significance in determining a significant long-term noise impact (see Section 4.10 for further detail). Alternative 2 would result in 1,000 fewer daily trips than the Project, which would result in corresponding decreases in roadway traffic noise generated. Although roadway traffic noise impacts are already less than significant, Alternative 2 would result in a lesser amount of roadway traffic noise generated than the Project.
- **Stationary Operational Noise.** The Project would result in the generation of noise from a number of stationary noise sources, such as outdoor gathering areas, mechanical equipment, garbage trucks, and parking areas. As discussed in Section 4.10, noise generated by these sources would not be substantial, and noise impacts would be less than significant. Alternative 2 would result in a much less-dense project than the proposed Project. Due to these reductions, noise levels associated with these sources would be reduced. Similar to the Project, noise impacts associated with stationary operational sources for Alternative 2 would be less than significant and marginally reduced.
- **Groundborne Vibration.** Activities associated with construction and operation of the Project would produce varying levels of vibration. During construction, heavy machinery used to construct the development would generate construction as pieces of equipment move around the Project site, and vibratory drivers would generate construction as temporary shoring is installed to protect construction workers working at subsurface grades. As discussed in Section 4.10, Project impacts associated with groundborne vibration would be less than significant with incorporation of MM-NOI-4, which requires a qualified professional to prepare construction vibration mitigation plans and to utilize pneumatic impact equipment. It also requires a buffer distance for heavy equipment operation adjacent to sensitive uses and structures. Construction of Alternative 2 would require the same construction techniques as the Project, and vibration impacts would be similar to those of the Project. MM-NOI-4 would be required for Alternative 2, and with implementation of mitigation, vibration impacts of Alternative 2 would be less than significant with mitigation incorporated. During operation of the Project, vehicles such as delivery trucks and garbage trucks would generate small amounts of vibration as they access the Project site. However, for the Project, these vehicles would generate vibration levels that were deemed to be less than significant. Alternative 2 would also involve the use of garbage trucks and delivery trucks (such as car delivery trucks) during operation, and operational vibration impacts would similarly be less than significant.

To summarize, Alternative 2 would result in similar and sometimes lesser noise impacts than the Project, but Alternative 2 would not avoid a short-term significant and unavoidable construction noise impact, although it would reduce the duration of exposure to construction noise given the shorter construction schedule.

Alternative 2 involves construction of improvements and structures on the same site as the Project. Similar to the Project, Alternative 2 would be in close proximity to sensitive receptors. Although less construction would occur under Alternative 2, short-term, on-site construction noise would remain significant and unavoidable due to the predicted magnitude of construction noise and the proximity of off-site sensitive receptors. Given that Alternative 2 would not involve the same uses as the Project and would generate less trips than the Project, it would be expected that Alternative 2 would have lesser operational noise impacts than the Project. Similar to the Project, the operational noise impacts of Alternative 2 would be less than significant.

Population and Housing

Alternative 2 would include approximately 120 residential units, compared with 1,213 units under the Project, which would result in a net decrease of 105 residential units on the site compared to the existing conditions. As such, while determined to be a less-than-significant impact under the Project, Alternative 2 would result in lower population growth and housing increase than the Project. However, because it includes fewer housing units, and no affordability benefit, Alternative 2 would also contribute less to the City's state-mandated RHNA goal than the Project. The vehicle dealership proposed under Alternative 2 could employ 50 or more people, depending on the size and type of dealership, whereas the Project would provide approximately 24 jobs. Assuming it employs 50 people, the vehicle dealership proposed under Alternative 2 would represent approximately 0.76% of the 6,600 jobs that are expected to be added to the City between 2016 and 2045 (see Section 4.11, Population and Housing, Table 4.11-3 for City employment projections), which is a higher percentage than the Project but still would not result in unplanned population growth as a result of increased employment opportunities. Alternative 2 would lower the job-to-housing ratio within the City because it would provide more housing units than jobs, but to a much lower extent than the Project.

The existing Park has housed as many as 373 mobile home park residents. However, an RIR (No. 05-20) has already been approved for the closure of the Park and the closure is underway, independent and irrespective of the development of the Project, Alternative 2, or any other development on the Project site. The relocation impacts related to displacement of Park residents are the result of the Park closure pursuant to the RIR approval, not a result of the Project, Alternative 2, or any other development on the Project site, and were addressed in the RIR approval. A CEQA notice of exemption was filed following the RIR approval, and was not timely challenged.

The RIR approval included analysis of the adverse impacts of the Park closure on the ability of the residents to be displaced to find alternative housing (including with respect to identifying housing available to residents displaced by the Park closure), and required measures to be taken by the Park Owner to mitigate those adverse impacts in accordance with applicable law, as discussed in more detail in Section 4.11, Population and Housing. Those measures must be satisfied as a condition of closure of the Park, irrespective of any development of the Project site. As such, Alternative 2 would not result in displacement, similar to the Project. However, given the substantial reduction in the number of residential units proposed under Alternative 2, Alternative 2 would result in a net reduction of 105 housing units within the City. In contrast, the Project would result in a net increase of 988 new residential units in the City. As such Alternative 2 would have greater impacts on population and housing to the Project. No mitigation would be required.

Public Services and Recreation

Alternative 2 would increase the intensity of use at the Project site compared to exiting conditions, but to a much smaller degree than the Project. As such, though determined to be less-than-significant for the Project, impacts related to fire and police protection would be reduced under Alternative 2 compared to the Project. While also not significant for the Project, Alternative 2 would have a lower impact on schools than the Project because it would include fewer residences and therefore fewer school-age children. The City currently has a parkland deficiency, independent of implementation of the Project or an Alternative. Whereas the Project would include a publicly-accessible park which would supplement the City's park supply, Alternative 2 would not include a park component. However, Alternative 2 would include far fewer housing units and therefore fewer residents utilizing City parks, recreational facilities, and other public facilities than the Project. As such, though determined to be less-than-significant for the Project, Alternative 2 would have lower impacts on public services, recreational and other public facilities than the Project. No mitigation would be required.

Transportation

As discussed under Land Use and Planning, Alternative 2, though not necessarily inconsistent, would be less supportive of some of the goals of the 2020–2045 RTP/SCS and the applicable goals and policies of the General Plan, including the Transportation and Infrastructure Element, than the Project. However, impacts would likely remain less than significant. Impacts related to Project site access and emergency access would be substantially similar to the Project, remaining less than significant. Although determined to be less than significant for the Project, Alternative 2 would likely add less traffic to the adjacent roadways and regional transportation networks, including freeways and freeway on-ramps and off-ramps (e.g., Interstate [I] 405), than the Project.

With regard to VMT, as discussed in Section 4.13, Transportation, the Project would result in less-than-significant VMT impacts. Because the Project's commercial component totals less than 50,000 square feet and would be local serving, the Project's commercial component was screened out of further VMT analysis and impacts were determined to be less than significant (Appendix K). With regard to the Project's residential component, the 2016 RTP/SCS SCAG model was used to determine home-based VMT and found that home-based VMT per capita for the Project would be 10.10, which is well below the threshold of significance at 14.4 (i.e., 30% below the Citywide average); thus, the Project's VMT impacts were determined to be less than significant.

With regard to the residential component of Alternative 2 and VMT, the reduction in unit count would result in a corresponding reduction in the number of persons residing on the Project site, as well as a reduction in VMT associated with the removal of trips associated with those residents. Home-based VMT is a per-capita metric that is calculated by dividing the total VMT by the residential population. Because Alternative 2 would reduce both the total VMT and the residential population, the home-based VMT per capita of Alternative 2 would be substantially similar to the VMT per capita of the Project, and Alternative 2's VMT impacts for the residential component would similarly be less than significant.

With regard to Alternative 2's commercial component, due to the auto dealership's size and the fact that it would result in 4,594 new trips, it cannot be screened out from the analysis and a VMT analysis would be required using the 2016 SCAG Regional Travel Demand Model to determine the significance of its impacts. However, in lieu of a quantitative VMT analysis, a qualitative review of Alternative 2's commercial uses in comparison to the Project's commercial uses indicates that Alternative 2 would have a higher VMT than the Project. The VMT of the Project's commercial component was determined to be less than significant given that it involves local serving commercial uses that total less than 50,000 square feet. This determination was made consistent with the State Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2017), which advises that local serving commercial uses generally

improve the convenience of shopping and dining close to home and has the effect of reducing vehicle travel. In contrast, the commercial component in Alternative 2 would be a large-scale auto dealership that would attract customers from a wider area. Comparing the two uses, it is likely that the proposed Project's café and restaurant uses would be patronized by a more localized customer base, considering that there are an abundance of restaurant and cafés throughout the City that would each be supported by a localized base. While Carson has multiple auto dealership within its City limits, they are less spatially distributed throughout the City (typically located on along the I-405 corridor) and would typically cater to a wider geographic customer base. Each dealership brand would presumably be located an appropriate distance away from a dealership of the same brand to avoid territorial encroachment, resulting in the need for customers choosing to purchase a specific make of automobile having to travel further distances to access a specific dealership brand. However, given concerns for territorial encroachment, dealerships located on the Project site as part of this alternative would presumably be located such that customers would no longer need to drive further distances to access a specific dealership brand. In effect, this may result in the substitution of longer trips for shorter ones (i.e., residents of the City would no longer need to drive to Hawthorne, Torrance, or Long Beach to find a specific dealership brand). As such, the auto sales portion of Alternative 2 may have a less than significant VMT impact.. Nonetheless, a qualitative review of the Project's commercial uses compared to Alternative 2's commercial uses indicates that VMT would be lesser for the Project than Alternative 2, given that customers accessing a more-regional serving auto dealership would likely have to drive further distances than they would for a local-serving restaurant and café, particularly given the abundance of restaurants and cafés in the area that would result in customers choosing to patronize restaurants closer to where they live. While the significance of the two uses' VMT impacts are likely to be less than significant, because the VMT of the Project is anticipated to be lesser than the VMT of Alternative 2, the VMT impact of Alternative 2 would be greater than the Project.

Utilities and Service Systems

Like the Project, Alternative 2 would include construction of water distribution infrastructure, wastewater infrastructure, electric power, natural gas, and telecommunications infrastructure, and would likely not require the expansion of stormwater infrastructure. Connections to existing infrastructure would be similar to the Project and thus such impacts would be less than significant. Because Alternative 2 includes far fewer residential units than the Project, demand for and utilization of utilities, although found to be less than significant for the Project, would be lower under Alternative 2 than the Project. Potable water and wastewater demands, which were determined to be less than significant for the Project, would also be reduced under Alternative 2. Solid waste generation during both construction and operation would be reduced compared to the Project, for which impacts were determined to be less than significant. No mitigation would be required.

6.3.3 Alternative 3 – Reduced Density and Sensitive Transition Alternative

Alternative 3 includes construction and operation of a development similar to and within the same general footprint as the Project, but the development would involve a lower density residential component and smaller scale. To provide a more sensitive transition between the single-family residential neighborhood along Grace Avenue, a row of detached townhome units would be located along the western boundary of the Project site along Grace Avenue in lieu of the Project's attached townhome units on the western boundary of the Project site. Attached townhome units would still be included, but they would be located in between the detached townhome units and the multifamily apartment units. Fewer attached townhome units would be provided given the addition of the detached townhome units. The remaining attached townhome units would also be set back further away from existing residences along the southwest and south property line. The commercial and open space components would be

largely unchanged from the Project, aside from potential minor spatial reconfiguration, and would encompass approximately the same square footages as the Project. The pedestrian bridge over the Torrance Lateral Drainage Canal to the north of the Project site, as well as the signalization of the Grace Avenue/213th Street Intersection, would be unchanged from the Project.

As with the Project, Alternative 3 would include adoption of a specific plan that is consistent with the development proposed (no modifications to the proposed IASP would be required under this alternative). Notably, Alternative 3 would provide a more gradual and sensitive transition between the higher-density apartment component of the development and the existing single-family residential neighborhood to the west of the Project site across Grace Avenue by placing detached townhome housing that is more consistent with the scale and spacing of the residential neighborhoods immediately adjacent to the area, as compared to the attached, more densely configured, townhomes proposed on the western boundary of the Project's site plan. Table 6-4 provides a summary of the unit counts and commercial square footage within this alternative, as well as a comparison to the Project.

Table 6-4. Comparison of Project to Alternative 3

	Project	Alternative 3	Delta vs. Project
Residential Uses			
Apartment			
Apartment units – Non-age restricted	653	682	29
Apartment units – Senior, age-restricted	180	83	(97)
Total Apartment Unit Count	**833**	**765**	**(68)**
Townhome			
Attached townhome units	380	323	(57)
Single-family stand-alone townhome units	0	28	28
Total Townhome Unit Count	**380**	**351**	**(29)**
Total Residential Unit Count	**1,213**	**1,116**	**(97)**
Commercial Uses			
Café/Restaurant Square Footage	10,352	10,352	0

Note: ( ) = negative value.

In an effort to evaluate the potential environmental effects of Alternative 3 relative to the Project, the trip generation characteristics of this alternative were estimated using trip generation rates from the Institute of Transportation Engineers Trip Generation Manual, 10th Edition. A detailed trip generation table is provided in Appendix M. Table 6-5 provides a summary and comparison of trip generation estimates of the Project and Alternative 3.

Table 6-5. Trip Generation Summary and Comparison

		AM Peak Hour			PM Peak Hour		
Land Use	Daily	*In*	*Out*	*Total*	*In*	*Out*	*Total*
Project[1]	5,586	125	277	402	283	174	457
Alternative 3[2]	5,477	123	281	404	287	173	460
Net Difference	**109**	**2**	**+4**	**+2**	**+4**	**1**	**+3**

Sources:

[1] Local Transportation Assessment (Appendix I).
[2] Alternatives 2 and 3 Trip Generation Tables (Appendix M).

Ability to Meet Project Objectives

Given the substantial similarities between Alternative 3 and the proposed Project, Alternative 3 would meet all of the Project objectives, but in some cases to a lesser extent than the Project. Given that Alternative 3 would maintain residential, commercial, and open space uses, and provide design and development regulations within the proposed IASP, Alternative 3 would meet the objective of creating a vibrant, new residential neighborhood with neighborhood-serving commercial uses and open-space amenities that furthers the land use, economic development, and urban design goals of the General Plan (Objective 1). The mix of housing types would meet the objective of providing new market rate and affordable housing opportunities across a mixture of housing products, assisting the City of Carson in meeting its RHNA goals, and diversifying the City's housing stock (Objectives 2 and 3). However, Alternative 3 meets this Objective to a lesser extent than the Project as it is providing fewer residences (97 fewer units). Because Alternative 3 would be developed in the same location as the Project, involve a mix of residential and commercial uses, and involve the creation of pedestrian pathways, greenbelts, and open space, Alternative 3 would meet the objective of reducing automobile trips by creating a mixed-use, pedestrian-oriented environment with residences and commercial uses near employment opportunities, recreational facilities, and publicly accessible open space within the City's core and in an area that is served by multiple transit lines (Objective 4). Lastly, because Alternative 3 would also involve the construction of a pedestrian bridge and the creation of pedestrian and bike pathways, greenbelts, and open space, Alternative 3 would meet the objective of facilitating pedestrian and bike connectivity between historically disconnected areas within the City through the development of a pedestrian bridge over the Torrance Lateral Drainage Canal, linking the Project site with the approved Carson Country Mart located within The District Specific Plan Area, and further increasing the supply of services, employment opportunities, recreational facilities, and publicly accessibly open space that is available within walking and biking distance to future residents in the area (Objective 5).

In summary, Alternative 3 would meet all of the Project objectives.

Comparison of the Effects of Alternative C to the Proposed Project

The Project would have no impacts or less-than-significant impacts for all resource areas other than construction noise. The following analysis provides a narrative comparison of the impacts of Alternative 3 relative to the Project.

Aesthetics

The aesthetics impacts of the Project were determined to be less than significant, as the proposed Project would not result in significant impacts with regard to scenic vistas, state scenic highways, conflicts with applicable zoning or other regulations governing scenic quality, substantial light or glare, or cumulative aesthetic impacts (see Section 4.1, Aesthetics, for a detailed discussion of these impact determinations). Because there are no scenic vistas or state scenic highways in the vicinity of the Project site, Alternative 3 would similarly not result in significant impacts with regard to scenic vistas or state scenic highways. Alternative 3 would involve the adoption of the same Specific Plan that is proposed by the Project, albeit with a development that features a reduced density and fewer residential units. Upon adoption, the Specific Plan would constitute the zoning for the Project site, and the land use and development standards identified in the Specific Plan would supersede all zoning regulations to the extent that they would be in conflict with the sections of the Specific Plan. Both the developments contemplated under Project and Alternative 3 would be required to confirm with all Specific Plan development standards, and thus, would not result in conflicts with applicable zoning or other regulations governing scenic quality. Both the Project and

Alternative 3 would also be required to comply with Municipal Code Section 9127.1, which requires that all exterior lighting installed on the Project site must be directed away from all adjoining and nearby residential property and arranged and controlled so it would not create a nuisance or hazard to traffic or to the living environment. For this reason, Alternative 3 would result in less than significant impacts with regard to light and glare. As such, Alternative 3 would result in the same less-than-significant aesthetics impacts as the proposed Project.

While Alternative 3 would result in the same aesthetics impacts as the proposed Project in the context of the thresholds of significance listed in Appendix G of the CEQA Guidelines, Alternative 3 would result in a notably less impactful project from a purely visual perspective when observed from viewpoints surrounding the Project site. This is primarily due to the fact that Alternative 3 would involve less development by way of its reduced density, and the construction of smaller scale, detached townhome units along the western boundary of the Project site along Grace Avenue in place of the multifamily attached townhome units proposed under the Project.

The detached townhome residential units proposed under Alternative 3 would have a height of 38 feet, which is seven feet less than the height proposed for the multifamily townhome units at 45 feet, resulting in less bulk and scale along Grace Street. Alternative 3 would also locate the proposed attached townhome units along the southwestern boundary of the Project site further away from the existing single family and multifamily residences south of the Project site. Under the proposed Project, the multifamily residential units along the southwestern boundary would be located as close as 17 feet away from the southern property boundary; under Alternative 3, this distance would be increased to 30 to 40 feet. Both the residential products proposed under the Project and Alternative 3 would feature a number of architectural treatments that would provide for a clean and contemporary design with a form, proportion, and articulation that relates to similar architectural approaches throughout the urban areas of the City. However, the site plan considerations under Alternative 3 would provide for a more sensitive and gradual transition between the higher-density apartment component of the development and the existing residential neighborhoods that surround the Project site by placing housing that is further set back from these neighborhoods and more consistent with the scale and spacing of these existing neighborhoods.

In summary, aesthetics impacts for Alternative 3 would be less than significant, similar to the proposed Project, but would result in a development with less density, scale, and bulk relative to the Project.

Air Quality

Alternative 3 would involve similar construction elements and duration to the Project. As such, construction-related air quality impacts under Alternative 3 would be less than significant, as with the Project. During operation, trip generation and energy usage would be slightly lower under Alternative 3 due to the slightly lower number of residential units and total residential square footage. Table 6-5 contains a summary and comparison of trip generation estimates of the Project (Appendix I) and Alternative 3 (Appendix M). As such, although operation-related air quality impacts under the Project were determined to be less than significant, they would be reduced under Alternative 3. This is because Alternative 3 would generate 109 fewer daily trips than the Project and would only involve the development of 1,116 residential units, which is 97 fewer than the Project. A reduction of 109 trips and 97 residential units would result in a corresponding reduction in air pollutant emissions from mobile sources (i.e., vehicles accessing the site), area sources (i.e., consumer products, architectural coating, and landscaping associated with residential units), and energy sources (i.e., electricity and natural gas demand). Although not significant for the Project, impacts to sensitive receptors would also be slightly reduced under Alternative 3 because operational emissions associated with vehicle trips would be reduced. All other impacts related to air quality under Alternative 3, including consistency with applicable air quality plans, as well as health risk impacts, would be similar to those under the Project and would be less than significant. As with Project, air quality impacts would be less than significant and no mitigation is required.

Cultural Resources and Tribal Cultural Resources

Alternative 3 includes similar ground disturbance on the same site as the Project, including excavation up to 45 feet below ground surface and into native soils. Excavation at such levels would be required for almost any redevelopment of the site because the existing subsurface of the site is not suitable to support structures as-is and requires excavation and recompaction (see Section 4.5, Geology and Soils, for additional details). As such, impacts related to cultural and tribal cultural resources under Alternative 3 would be similar to those under the Project. The Project includes MM-TCR-1 to address potential impacts to tribal cultural resources by way of monitoring during ground disturbing activities, which would also be applicable to Alternative 3. As with the Project, with adherence to MM-TCR-1, Alternative 3's impacts would be less than significant. No additional mitigation would be required.

Energy

Although impacts related to energy use were determined to be less than significant for the Project, Alternative 3 would include fewer residential units and lower residential square footage than the Project. As such, transportation energy demand, electricity demand, and natural gas demand would all be reduced under Alternative 3 due to the fact that Alternative 3 would result in 109 fewer daily trips than the proposed Project 97 fewer residential units than the proposed Project. As such, Alternative 3 would use less energy during operation than the Project. All other impacts related to energy under Alternative 3 would likely be similar to or less than those under the Project and would be less than significant. Like the Project, no mitigation would be required.

Geology and Soils

Alternative 3 involves similar construction on the same site as the Project. As with the Project, Alternative 3 would be designed and constructed in accordance with the requirements of the California Building Code. As such, Alternative 3's impacts related to geology and soils would be similar to the Project. MM-PALEO-1 would be applicable to Alternative 3 to reduce potential impacts to paleontological resources. With application of MM-PALEO-1, impacts with regard to geology and soils for Alternative 3 would be less than significant. No additional mitigation would be required.

Greenhouse Gas Emissions

As discussed under Air Quality, Alternative 3 would have slightly reduced air emissions during operation compared to the Project due to the reduction in daily trips (109 fewer than the Project) and the number of residential units (97 fewer than the Project). Accordingly, although not significant for the Project, Alternative 3 would also result in a reduction in GHG emissions compared to the Project. The Project was determined to be consistent with applicable GHG plans, policies, and regulations. Because Alternative 3 would have lower GHG emissions than the Project, it would also be consistent with such plans, policies, and regulations. Like the Project, no mitigation would be required.

Hazards and Hazardous Materials

Alternative 3 would include similar construction and operation characteristics when compared to the Project. As such, similar hazardous materials would be handled, transported, and disposed of during both construction and operation. As with the Project, these impacts would remain less than significant through adherence to applicable regulations. Alternative 3 would adhere to PDF-HAZ-1 during ground-disturbing activities, which would involve the preparation and implementation of a soil management plan to inspect and properly handle soils that may contain

trace amounts of contaminated materials. As Alternative 3 is located on the same site as the Project, hazards and hazardous materials impacts related to the physical location and attributes of the site would remain the same under Alternative 3. Impacts would be less than significant, and no mitigation would be required.

Hydrology and Water Quality

Like the Project, Alternative 3 would adhere to the requirements of the NPDES Construction General Permit during construction, which would include preparation of and adherence to a stormwater pollution prevention plan, including best management practices to protect stormwater runoff. Like the Project, Alternative 3 would be subject to the requirements of the MS4 NPDES permit during operation, which sets limits on pollutants being discharged into waterways and requires all new development to incorporate low impact development features that are laid out in the 2014 Los Angeles County Low Impact Development Manual. Because Alternative 3 would be constructed on the same site as the Project and would adhere to all applicable requirements during construction and operation, Alternative 3 would have substantially similar impacts on hydrology and water quality to the Project. Impacts would be less than significant, and no mitigation would be required.

Land Use and Planning

As with the Project, Alternative 3 would include a General Plan Amendment, Zone Change, and the adoption of the proposed IASP. Upon adoption,, the IASP would constitute the zoning for the Project site, and the land use and development standards identified in the IASP would supersede all zoning regulations to the extent that they would be in conflict with the sections of the IASP. Both the developments contemplated under Project and Alternative 3 would be required to comply with the development regulations of the proposed IASP, and thus, would not result in conflicts with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Because the uses proposed under Alternative 3 are the same as the Project, aside from a slight reduction in residential units and total residential square footage, Alternative 3 would also be supportive of the goals of the SCAG 2020–2045 RTP/SCS and the City's General Plan policies in a similar way as the Project. Like the Project, impacts related to land use and planning under Alternative 3 would be less than significant and no mitigation would be required.

Noise

Alternative 3 would involve similar construction elements and duration when compared to the Project. As discussed in Section 4.10, short-term construction noise impacts for the Project would be significant and unavoidable due to the predicted magnitude of construction noise and the proximity of off-site sensitive receptors. Noise levels during the demolition and grading phase of Project construction are anticipated to result in noise levels as high as 70.4 dBA L_{eq} and 114.3 dBA L_{eq}, respectively. These levels would exceed the construction noise threshold of 60.1 dBA L_{eq}. MM-NOI-1 and MM-NOI-2, which require measures to limit construction noise via best management practices and the placement of noise barriers along the Project site boundary near adjacent residences, would reduce this impact, but not to below a level of significance. Construction activities for Alternative 3 would generally be the same as the proposed Project and would require the use of construction equipment throughout the entire site, similar to the Project. Due to the necessity to use construction equipment throughout the entire site, Alternative 3 would not result in construction activities occurring further away from sensitive receptors. Granted, building construction would occur further away from the sensitive receptors, but the construction phases that generate the most noise (i.e., demolition and grading), would still occur in the same locations as under the Project. Given that the same construction activities would occur for Alternative 3 as the Project (and in the same locations), Alternative 3 would similarly result in significant and unavoidable short-term construction noise impacts. Implementation of MM-NOI-1

and MM-NOI-2 would be required to reduce the severity of this impact for Alternative 3, but not to below a level of significance. As such, Alternative 3 would result in significant and unavoidable short-term construction noise impacts, but with reduced severity as compared to the Project given the shortened building construction phase that would be necessary.

Section 4.10 also discussed other sources of noise that would be generated by the Project and the significance of their associated impacts. These noise sources are discussed below.

- **Construction Truck Trips.** Construction of the Project would require the use of heavy trucks accessing the Project site to deliver and remove construction materials and waste. With implementation of MM-NOI-3, which requires the routing of haul truck trips away from sensitive receptors and the limiting of haul truck deliveries to the same hours specified for construction equipment (between the hours of 7:00 a.m. to 8:00 p.m. on weekdays and Saturdays only), impacts associated with construction truck trips were determined to be less than significant. Alternative 3 would generally involve the same construction components as the Project, including similar use of construction truck trips, and would result in similar construction truck trip noise. With implementation of MM-NOI-3, construction truck trip noise impacts for Alternative 3 would be less than significant with mitigation incorporated, similar to the Project.
- **Roadway Traffic Noise.** The Project would result in traffic on adjacent roadways from daily activities, which would result in off-site roadway traffic noise. As discussed in Section 4.10, even with the addition of this traffic on the local roadway system, traffic noise level increases would not exceed 5 dB or 3 dB, which are used as thresholds of significance in determining a significant long-term noise impact (see Section 4.10 for further detail). Alternative 3 would result in 109 fewer daily trips than the Project, which would result in corresponding decreases in roadway traffic noise generated. Although roadway traffic noise impacts are already less than significant, Alternative 3 would result in a lesser amount of roadway traffic noise generated than the Project.
- **Stationary Operational Noise.** The Project would result in the generation of noise from a number of stationary noise sources, such as outdoor gathering areas, mechanical equipment, garbage trucks, and parking areas. As discussed in Section 4.10, noise generated by these sources would not be substantial, and noise impacts would be less than significant. Alternative 3 would result in a less-dense project with 97 fewer residential units than the proposed Project. Due to these reductions, noise levels associated with these sources would be marginally reduced. Similar to the Project, noise impacts associated with stationary operational sources for Alternative 3 would be less than significant and marginally reduced.
- **Groundborne Vibration.** Activities associated with construction and operation of the Project would produce varying levels of vibration. During construction, heavy machinery used to construct the development would generate construction as pieces of equipment move around the Project site, and vibratory drivers would generate construction as temporary shoring is installed to protect construction workers working at subsurface grades. As discussed in Section 4.10, Project impacts associated with groundborne vibration would be less than significant with incorporation of MM-NOI-4, which requires a qualified professional to prepare construction vibration mitigation plans and to utilize pneumatic impact equipment. It also requires a buffer distance for heavy equipment operation adjacent to sensitive uses and structures. Construction of Alternative 3 would require the same construction techniques as the Project, and vibration impacts would be similar to those of the Project. MM-NOI-4 would be required for Alternative 3, and with implementation of mitigation, vibration impacts of Alternative 3 would be less than significant with mitigation incorporated. During operation of the Project, vehicles such as delivery trucks and garbage trucks would generate small amounts of vibration as they access the Project site. However, for the Project, these vehicles would generate vibration levels that were deemed to be less than significant. Alternative 3 would also involve the

use of garbage trucks and delivery trucks during operation, and operational vibration impacts would similarly be less than significant.

To summarize, Alternative 3 would result in similar and sometimes lesser noise impacts than the Project, but Alternative 3 would not avoid a short-term significant and unavoidable construction noise impact.

Population and Housing

Alternative 3 would include a maximum 1,116 residential units, which is 97 less than the Project. As such, while determined to be a less-than-significant impact under the Project, Alternative 3 would result in slightly lower population growth than the Project. However, because it includes fewer housing units, Alternative 3 would also contribute less to the City's state-mandated RHNA goal than the Project. Alternative 3 would include the same commercial square footage as the Project and would therefore provide the same number of employment opportunities as the Project. Alternative 3 would still lower the job-to-housing ratio within the City because it would provide more housing units than jobs, but to a slightly lower extent than the Project.

The existing Park has housed as many as 373 mobile home park residents. Specifically, RIR (No. 05-20) has already been approved for the closure of the Park and the closure is underway, independent and irrespective of the development of the Project, Alternative 3, or any other development on the Project site. The relocation impacts related to displacement of Park residents are the result of the Park closure pursuant to the RIR approval, not a result of the Project, Alternative 3, or any other development on the Project site, and were addressed in the RIR approval. A CEQA notice of exemption was filed following the RIR approval, and was not timely challenged.

The RIR approval included analysis of the adverse impacts of the Park closure on the ability of the residents to be displaced to find alternative housing (including with respect to identifying housing available to residents displaced by the Park closure), and required measures to be taken by the Park Owner to mitigate those adverse impacts in accordance with applicable law, as discussed in more detail in Section 4.11, Population and Housing. Those measures must be satisfied as a condition of closure of the Park, irrespective of any development of the Project site. However, both the Project and Alternative 3 could serve to fully satisfy the required replacement housing measures of the RIR approval (e.g., Option C, as discussed in more detail in Section 4.11, Population and Housing) in lieu of the Park Owner being obligated to satisfy them via another site, in addition to generally providing more housing opportunities for both existing Park residents and the public generally (with Alternative 3 providing slightly fewer such opportunities than the Project). Alternative 3 would be subject to the same requirements as the Project under the RIR approval related to impacts of the closure on residents of the Park. Alternative 3 would have substantially similar impacts with regard to population and housing to the Project. No mitigation would be required.

Public Services and Recreation

Alternative 3 would increase the intensity of use at the Project site to a similar, but marginally lower, degree than the Project. As such, impacts related to fire and police protection would be similar to the Project under Alternative 3 and would remain less than significant. While also not significant for the Project, Alternative 3 would have a slightly lower impact on schools than the Project because it would include fewer residences and therefore fewer school-age children. The City currently has a parkland deficiency, independent of implementation of the Project or an Alternative. Alternative 3 would include approximately the same amount of publicly accessible park space as the Project, which would supplement the City's deficiency. Additionally, Alternative 3 would include slightly fewer housing units and therefore fewer residents utilizing City parks, recreational facilities, and other public facilities than the Project. As such, though determined to be less than significant for the Project, Alternative 3 would have

slightly lower impacts on public services, recreational and other public facilities than the Project. No mitigation would be required.

Transportation

As discussed under Land Use and Planning, as with the Project, Alternative 3 is consistent with the goals of the 2020–2045 RTP/SCS and the applicable goals and policies of the General Plan with a General Plan Amendment, including the Transportation and Infrastructure Element. Impacts related to Project site access and emergency access would be substantially similar to the Project, remaining less than significant. Although determined to be less than significant for the Project, Alternative 3 would add less slightly less traffic to Caltrans facilities, including freeways and freeway on-ramps and off-ramps, because Alternative 3 would result in 109 fewer daily trips than the Project, as outlined in Table 6-5.

With regard to VMT, as discussed in Section 4.13, Transportation, the Project would result in less than significant VMT impacts. Because the Project's commercial component totals less than 50,000 square feet and would be local serving, the Project's commercial component was screened out of further VMT analysis and impacts are presumed to be less than significant. With regard to the Project's residential component, the 2016 RTP/SCS SCAG model was used to determine home-based VMT and found that home-based VMT per capita for the Project would be 10.10, which is well below the threshold of significance at 14.4 (i.e., 30% below the Citywide average); thus, the Project's VMT impacts were determined to be less than significant.

Alternative 3 would involve the same amount of commercial space and 97 fewer residential units than the Project. Given that commercial space for Alternative 3 would be the same as the Project, the commercial component of Alternative 3 would similarly be screened out of further analysis and impacts are similarly presumed to be less than significant. With regard to the residential component of Alternative 3, the reduction in unit count would result in a corresponding reduction in the number of persons residing on the Project site, as well as a reduction in VMT associated with the removal of trips associated with those residents. Home-based VMT is a per-capita metric that is calculated by dividing the total VMT by the residential population. Because Alternative 3 would reduce both the total VMT and the residential population, the home-based VMT of Alternative 3 would be substantially similar to the VMT of the Project, and Alternative 3's VMT impacts would similarly be less than significant.

Furthermore, Alternative 3 would similarly reduce City-wide VMT per capita by locating residential uses within the central Los Angeles and South Bay region, which is currently experiencing a jobs to housing imbalance as the majority of persons that have jobs in the region are commuting from outside the region (see Section 4.11 for further detail). While Alternative 3 would result in 97 fewer residential units than the Project, Alternative 3 would still provide for 891 new residential units in the City, which would provide housing opportunities for persons employed in the area, thereby assisting in reducing regional VMT.

Lastly, Alternative 3 would include the same design features as the Project with respect to reducing VMT (see PDF- TRAF-1, discussed in Chapter 3). PDF-TRAF-1 involves the provision of regularly scheduled shuttle services for senior residents to access shopping and services in the surrounding areas, the unbundling of parking and monthly rent (for the apartment component) to allow for tenants to more consciously weigh the costs and benefits of purchasing additional parking spaces (which incentivizes reducing overall vehicle occupancy), a car sharing program to allow for greater flexibility for residents who do not own a vehicle, and workstation areas to facilitate telecommuting. Taken together, these measures would further reduce Alternative 3's already less-than-significant VMT impacts.

In summary, Alternative 3 would have similar, and slightly reduced, less-than-significant transportation impacts when compared to the Project and no mitigation would be required.

Utilities and Service Systems

Like the Project, Alternative 3 would include construction of water distribution infrastructure, wastewater infrastructure, electric power, natural gas, and telecommunications infrastructure and would likely not require the expansion of stormwater infrastructure. Connections to existing infrastructure would be similar to the Project. Generation of solid waste construction debris would be similar to the Project. As such, construction impacts related to utilities and service systems would remain less than significant under Alternative 3. Because Alternative 3 includes slightly fewer residential units that the Project, demand for and utilization of utilities, although found to be less than significant for the Project, would be slightly lower under Alternative 3 than the Project. Potable water and wastewater demands, as well as solid waste generation during operation that was determined to be less than significant for the Project, would also be slightly reduced under Alternative 3. Impacts would remain less than significant and no mitigation would be required.

6.4 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) indicates that an analysis of alternatives to a project shall identify an Environmentally Superior Alternative among the alternatives evaluated in an EIR. The CEQA Guidelines also state that should it be determined that the No Project Alternative is the Environmentally Superior Alternative, the EIR shall identify another Environmentally Superior Alternative among the remaining alternatives.

A comparative summary of the environmental impacts associated with each alternative is provided in Table 6-6. As shown, Alternative 1A (No Project and Non-Operational Mobile Home Park Alternative) would be the Environmentally Superior Alternative, as it would result in no environmental impacts aside from a potentially significant impact related to land use and planning and a less-than-significant impact related to utilities and service systems. Therefore, as required by CEQA, since the No Project Alternative would be the environmentally superior alternative, Alternative 2 (Development Consistent with Existing General Plan/Zoning) has been identified as the other Environmentally Superior Alternative.

In general, Alternative 2 is environmentally superior to Alternative 3 for the following reasons.

- Alternative 2 would result in the generation of 1,000 fewer average daily trips than the Project, while Alternative 3 would result in the generation of 109 fewer average daily trips than the Project. This difference in trips generated for Alternative 2 compared to Alternative 3 would result in a corresponding reduction in air pollutant emissions from mobile sources (i.e., vehicles accessing the site).
- Alternative 2 generally involves less building area and fewer residential units. For the reasons discussed above, these would result in corresponding reductions in the severity of impacts for air quality, greenhouse gas emissions, noise, and transportation.

While Alternative 2 would not avoid the Project's significant and unavoidable short-term construction noise impact, it would not result in impacts that are greater than those of the Project and would further reduce the magnitude of many of the Project's already less-than-significant impacts. However, Alternative 2 would fail to meet almost all of the Project Objectives.

In contrast, Alternative 3 (Reduced Density and Sensitive Transition) would meet all of the Project Objectives and would be environmentally superior to the Project. While Alternative 3 would not avoid the Project's significant and unavoidable short-term construction noise impact (but it would lessen it), it would not result in impacts that are greater than those of the Project and would further reduce the magnitude of many of the Project's already less-than-significant impacts.

Table 6-6. Comparison of Impacts

Impact Area	Proposed Project	No Project and Non-Operational Mobile Home Park Alternative (Alternative 1A)	No Project and Mobile Home Park Removal Alternative (Alternative 1B)	Development Consistent with Existing General Plan/Zoning (Alternative 2)	Reduced Density and Sensitive Transition (Alternative 3)
Aesthetics	LTS	NI (Lessened)	NI (Lessened)	LTS (Similar, but lessened)	LTS (Similar, but lessened)
Air Quality	LTS	NI (Lessened)	NI (Lessened)	LTS (Similar, but lessened)	LTS (Similar, but lessened)
Construction	LTS	NI (Lessened)	NI (Lessened)	LTS (Similar, but lessened)	LTS (Similar, but lessened)
Operation	LTS	NI (Lessened)	NI (Lessened)	LTS (Similar, but lessened)	LTS (Similar, but lessened)
Cultural/Tribal Cultural Resources	LTSM	NI (Lessened)	NI (Lessened)	LTSM (Similar)	LTSM (Similar)
Energy	LTS	NI (Lessened)	NI (Lessened)	LTS (Similar, but lessened)	LTS (Similar, but lessened)
Geology and Soils	LTSM	NI (Lessened)	NI (Lessened)	LTSM (Similar)	LTSM (Similar)
Greenhouse Gas Emissions	LTS	NI (Lessened)	NI (Lessened)	LTS (Similar, but lessened)	LTS (Similar, but lessened)
Hazards and Hazardous Materials	LTS	NI (Lessened)	NI (Lessened)	LTS (Similar)	LTS (Similar)
Hydrology and Water Quality	LTS	NI (Lessened)	NI (Lessened)	LTS (Similar)	LTS (Similar)
Land Use and Planning	LTS	PS (Greater)	NI (Lessened)	LTS (Similar, but potentially greater)	LTS (Similar)
Noise	SU	NI (Lessened)	SU (Similar)	SU (Similar)	SU (Similar)
Construction Noise	SU	NI (Lessened)	SU (Similar)	SU (Similar, but lessened)	SU (Similar, but lessened)
Operation Noise	LTS	NI (Lessened)	LTS (Similar)	LTS (Similar, but lessened)	LTS (Similar, but lessened)
Construction Vibration	LTSM	NI (Lessened)	LTS (Lessened)	LTSM (Similar, but lessened)	LTSM (Similar, but lessened)
Operation Vibration	LTS	NI (Lessened)	LTS (Similar)	LTS (Similar)	LTS (Similar)
Population and Housing	LTS	LTS (Similar)	LTS (Similar)	LTS (Greater)	LTS (Similar)
Public Services and Recreation	LTS	NI (Lessened)	NI (Lessened)	LTS (Similar)	LTS (Similar)

Table 6-6. Comparison of Impacts

Impact Area	Proposed Project	No Project and Non-Operational Mobile Home Park Alternative (Alternative 1A)	No Project and Mobile Home Park Removal Alternative (Alternative 1B)	Development Consistent with Existing General Plan/Zoning (Alternative 2)	Reduced Density and Sensitive Transition (Alternative 3)
Transportation and Traffic	LTS	NI (Lessened)	NI (Lessened)	PS (Greater)	LTS (Similar, but lessened)
Utilities and Service Systems	LTS	NI (Lessened)	NI (Lessened)	LTS (Similar)	LTS (Similar)

Notes: NI = No Impact; LTS = Less-than-Significant Impact; LTSM = Less-than-Significant Impact with Mitigation; PS = Potentially Significant Impact; SU = Significant and Unavoidable Impact

6.5 References

City of Carson. 2004. *City of Carson General Plan*. Adopted October 11, 2004. As amended. http://ci.carson.ca.us/content/files/pdfs/planning/CityofCarsonGeneralPlan.pdf.

City of Carson. 2015. City of Carson General Plan –Land Use [map]. Scale not given. Printed August 5, 2015. Accessed May 30, 2021. http://ci.carson.ca.us/content/files/pdfs/GIS/mapgallery/GeneralPlan24x36.pdf.

City of Carson. 2017. Zoning [map]. Scale not given. Printed August 1, 2017. Accessed February 7, 2022. http://gis.carson.ca.us/pdfs/mapgallery/Zoning_11x17.pdf.

City of Carson. 2021. *Draft Supplemental Environmental Impact Report. The District at South Bay Specific Plan Amendment*. https://ci.carson.ca.us/content/files/pdfs/planning/docs/projects/TheDistrict2021/EnvironDocs/_TheDistrictatSouthBay_PublicDraftSEIR_2021-10-28.pdf.

LoopNet. 2022. Search for 25-Acre to 35-Acre Sites within 10 Miles of 21207 Avalon Boulevard, Carson, CA. Accessed January 2022. https://www.loopnet.com/search/carson-ca-90745/for-sale/?sk=6d4c314b069db53b5839dc675d3924ba.

OPR (California Governor's Office of Planning and Research). 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018. http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

SCAG (Southern California Association of Governments). 2020. 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy. Adopted May 7, 2020. https://www.connectsocal.org/Documents/Adopted/fConnectSoCal-Plan.pdf.

7 List of Preparers

7.1 City of Carson

Saied Nessah, Director of Community Development
Alvie Bentacourt, Planning Manager
Gena Guisar, Planner

7.2 Dudek

Jason Reynolds, Senior Project Manager
Patrick Cruz, Project Manager
Hayley Ward, Environmental Analyst
Jennifer Reed, Air Quality Specialist
Eric Schniewind, Geology, Hazards and Hydrology Specialist
Mark Storm, Senior Noise Specialist
Sabita Tewani, Transportation Specialist
Daniela Yurovsky, Technical Editor
Chris Auger, Mapping Specialist

7.3 Michael Baker International

Eddie Torres, Planning Department Manager
Danielle Regimbal, Air Quality, Noise, and Climate Change Specialist
Faye Stroud, Graphics

7.4 ASM Affiliates, Inc.

Sherri Andrews, Senior Archaeologist

7.5 Architectural Resources Group, Inc.

Katie Horak, Principal
Mary Ringhoff, Associate

7.6 Geotechnologies, Inc.

Gregorio Varela, Project Engineer

7.7 Advantage Environmental Consultants, LLC

Keith Sy, Project Manager
Daniel Weis, R.E.H.S., Branch Manager
Eric Cathcart, MS, PG, Senior Geologist

7.8 Fehr & Peers

Drew Heckathorn, Senior Transportation Planner
Michael Kennedy, Principal

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DUDEK

800.450.1818 | HELLO@DUDEK.COM

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